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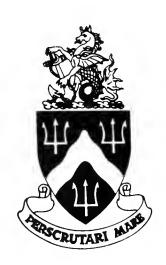
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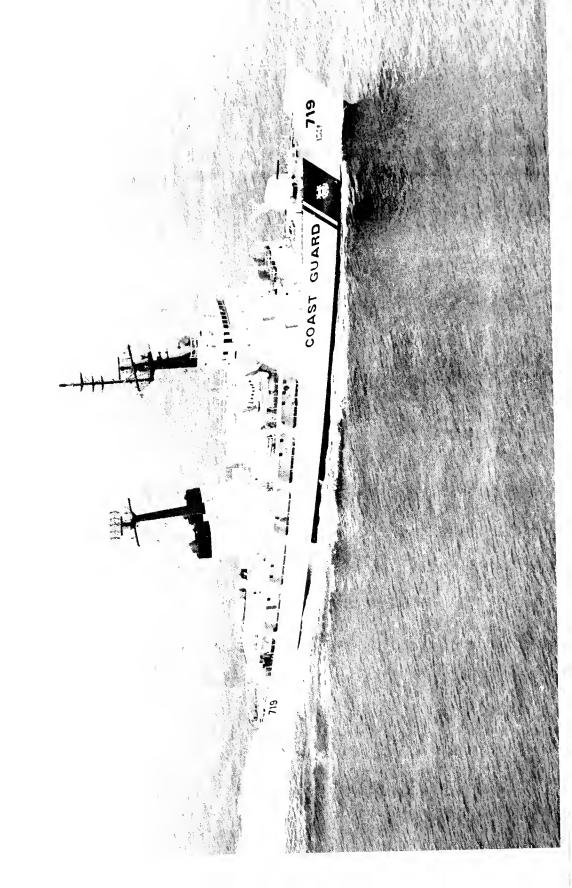
# REPORT No. 49 CG 373-49

OCEANOGRAPHIC OBSERVATIONS NORTH ATLANTIC OCEAN STATION ECHO

November 1967-December 1968

Alan D. Rosebrook

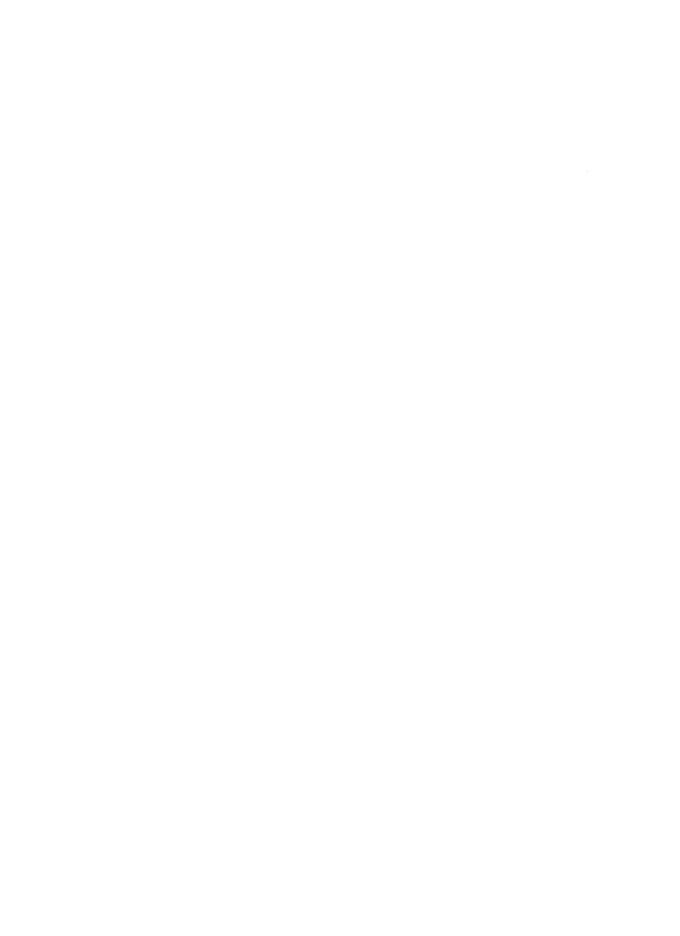




#### Abstract

Observed and interpolated temperature and salinity data, plus computed sigma-t values, geopotential anomalies and sound velocities, are presented for 315 oceanographic stations occupied by U.S. Coast Guard cutters at Ocean Station ECHO (centered at 35° 00′N, 48° 00′W) during November 1967–December 1968. Profiles of temperature versus depth and salinity versus depth, as well as a plot of temperature versus salinity are presented for each of the 14 patrols. Plots of temperature versus time and salinity versus time at selected depths are presented and analyzed to describe annual temperature and salinity cycles at ECHO. The presence of Mediterranean water at intermediate depths, and a series of temperature and salinity cycles with periods of 2 to 3 months at depths between 200 and 700 m are noted.

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# Oceanographic Observations on North Atlantic Ocean Station ECHO

#### November 1967-December 1968

Alan D. Rosebrook<sup>1</sup>

#### INTRODUCTION

Ocean Station ECHO (figs. 1 and 2) is one of four stations in the North Atlantic Ocean which have been regularly occupied by U.S. Coast Guard cutters for the acquisition of meteorological and oceanographical data. The Coast Guard Oceanographic Unit, in cooperation with the U.S. Naval Oceanographic Office (NAVOCEANO), first conducted oceanographic observations at ECHO aboard CGC CASCO in January-February 1963. These data were published in U.S. Coast Guard Oceanographic Report No. CG 373-2 (Morse and McGary, 1964). A long-term series of observations was initiated by CGC YAKUTAT in September-October 1966. The results of oceanographic observations taken from September 1966 through October 1967 were presented in U.S. Coast Guard Oceanographic Report No. CG 373-21 (Shuhy, 1969).

#### DATA COLLECTION AND PROCESSING

A total of 315 oceanographic stations was taken by U.S. Coast Guard cutters at Ocean Station ECHO during 14 patrols from 28 November 1967 to 5 December 1968. A summary of oceanographic operations during the period is presented as table 1.

On 12 patrols, 226 daily Nansen casts were made to sample 14 prescribed levels to 1,500 meters, weather and operational commitments permitting. Initially, shallow cast observations were desired at 0, 25, 50, 75, 100, 150, 200, 400, 500, 600, 800, 1,000, 1,250 and 1,500 m. During

the June–July 1968 patrol by CGC HALF MOON a Nansen bottle was placed at 300 m and the 1,250 bottle was deleted. For the remainder of the observational period the desired depths were 0, 25, 50, 75, 100, 150, 200, 300, 400, 600, 800, 1,000, 1,250 and 1,500 m. In addition, once during each patrol at least one deep cast to near bottom was attempted. The additional sampling depths prescribed for deep casts were 2,000, 2,500, and 3,000 m, and 150 and 50 m off the bottom. Twenty deep casts were taken successfully during the period.

Each Nansen bottle was equipped with two protected deep sea reversing thermometers. In addition, five Nansen bottles used at 200 meters and below were each fitted with an unprotected thermometer so that thermometric depths could be determined. Temperature data were transmitted to the Coast Guard Oceanographic Unit via radioteletype immediately after each cast for real-time data processing and quality control. In situ temperature values were computed by a Digital Equipment Corp. PDP-5 computer to determine corrected temperatures and thermometric depths. After the data were quality controlled, they were relayed to Fleet Weather Central, Norfolk, Va., and to Fleet Numerical Weather Central, Monterey, Calif., for use in forecasting synoptic oceanic conditions.

Water samples were drawn from the Nansen bottles and the salinity of the samples was determined using a shipboard inductive salinometer. The conductivity values obtained were converted to salinity by use of the International Oceanographic Tables published jointly by UNESCO and the National Institute of Ocean-

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			Number of casts					
Cruise number 1	Coast Guard Cutter	Dates	Shallow	Deep	NODC Reference No.	Data table	Standard sections	
E-7	CASTLE ROCK	11/28-12/11/67	8	0	31-1181	I	None.	
E8	HUMBOLDT	1/10- 2/ 1/68	23	1	31-1203	H	None.	
E-9	ESCANABA	2/29- 3/19/68	18	1	31-1240	111	None.	
E-10	MENDOTA	4/12- 5/ 4/68	18	1	31 - 1262	IV	A-6 (31-1262).	
E-10 E-11	CASCO	5/ 5- 5/27/68	13	7	31 - 1248	V	None.	
E-11 E-12	SEBAGO	5/28- 6/19/68	20	2	31-1273	VI	A-7 (31-1273).	
E-12 E-13	HALF MOON	6/20- 7/12/68	23	4	31-1304	VII	A-4 (31-1304).	
E-13 E-14	CASTLE ROCK	7/14- 8/ 4/68	20	1	31-1303	VIII	A-4 (31-1303).	
E-14 E-15	SEBAGO	8/ 5- 8/27/68	23	1	31-1311	IX	None.	
E-16	CHASE (STD)	9/ 1- 9/22/68	71	0	31-8502	$\mathbf{X}$	None.	
E-16 E-17	DALLAS	9/23-10/11/68	19	1	31-1381	XI	A-4 (31-1382).	
E-17 E-18	YAKUTAT	10/12-11/ 5/68	25	1	31-1383	XII	A-5 (31-1384).	
E-18 E-19	Mc CULLOCH	11/ 6-11/25/68	16	0	31-1385	XIII	A-6 (31-1386).	
E-19 E-20	BOUTWELL (STD)	11/30-12/ 5/68	18	0	31-8078	XIV	None.	

The letter "E" in the Cruise number indicates data taken at Ocean Station ECHO. The number following the hyphen is the serial number of the occupation.

ography of Great Britain (1966). The results were sent to the Coast Guard Oceanographic Unit by radioteletype at intervals of 3–5 days. An additional water sample was collected from the top and bottom Nansen bottle of each cast for delivery to the Coast Guard Oceanographic Unit at the end of the patrol for the purpose of quality control.

During two patrols on Ocean Station ECHO, temperature and salinity data were collected using a salinity-temperature-depth sensor system (STD). The STD was used for the first time on ECHO in September 1968 when a Bissett-Berman Model 9006 STD system collected salinity data to a maximum depth of 300 m. No temperature data were recorded because of failure of the temperature sensor. During the November-December 1968 ECHO patrol, the Model 9040 STD system was utilized for the first time on any ocean station. Problems with the salinity sensor resulted in salinity data being recorded at only five of the 18 stations occupied. STD data were relayed by each cutter directly to Fleet Weather Central, Norfolk, Va. for use in forecasting synoptic oceanic conditions. In addition, all data were returned to the Coast Guard Oceanographic Unit for quality control prior to submission to the National Oceanographic Data Center (NODC).

The processed temperature and salinity data from all observations were recorded on Form NHO/NODC-3167/40(4-66), "Physical and

Chemical Data Form for Oceanographic Stations," and delivered to the National Oceanographic Data Center (NODC). The interpolated temperatures and salinities for standard depths, sigma-t values, specific volume anomalies, and sound velocities were computed by NODC and are presented in appendix A.

Ocean station vessels normally maintain their position within a 10-mile square grid (centered at 35° 00′N, and 48° 00′W for ECHO), operations and weather permitting. Oceanographic stations are normally taken inside the 10-mile central grid. The positions of all stations taken outside the central grid during each patrol are shown in figures 3–16.

#### INTERPRETATION OF RESULTS

The data collected during 14 patrols on Ocean Station ECHO from 28 November 1967 to 5 December 1968 were analyzed to determine if annual cycles of temperature and salinity could be observed (figs. 44 and 45). Changes in surface layer temperature followed a seasonal pattern, reaching a maximum in midsummer and a minimum during the colder winter months. Salinity also varied with the seasons, generally increasing and decreasing in phase with the temperature. The salinity cycle, however, was not as well defined as the temperature cycle.

The annual temperature cycle at ECHO during the observational period consisted of a cooling trend in the surface water from Novem-

ber 1967 through February 1968. By late January, the cooling effect extended to a depth of 200 m. The minimum surface temperature (17.37°C) was recorded on 1 March 1968, after which a gradual warming of the surface layer was noted. After remaining relatively constant during April and May 1968, the sea surface temperature began to increase until the maximum temperature value (25.27°C) was reached on 1 August 1968. Temperature values remained near the maximum value through September before cooling caused a gradual decline throughout the remainder of the observational period.

During November and December 1967, the water column was isothermal to a depth of about 85 m. As cooling continued, the depth of the isothermal layer increased. By late January 1968, it had reached a maximum depth of about 200 m. During March and April 1968, the surface water layer began warming slowly. Below the gradually deepening layer of warmer surface water, the water column remained isothermal to almost 200 m. By May 1968, surface heating and wind mixing had combined to destroy the subsurface isothermal layer. As the surface water mass began to cool in September, an isothermal layer developed and had reached a depth of 100 m by early December 1968.

Seasonal temperature variation was confined to the upper 200 m. A main thermocline was observed during the entire observational period approximately between 200 and 800 m. Below 800 m the temperature values remained relatively constant with depth and showed little variation during the year.

A strong correlation existed between the temperature and salinity cycle observed between November 1967 and December 1968; temperature increases and decreases were usually matched by similar changes in salinity values. Surface salinity values during the observation period ranged from 36.08% to 36.55%. The annual salinity cycle was characterized by lower salinity values in the surface layer during the cooler winter months, and higher values during the summer. The top of the permanent halocline at about 250 m effectively marked the limit of seasonal salinity variations. The halocline extended to a depth of approximately 700 m. Beneath the halocline, salinity values were relatively constant with depth and time down to 1,500 m.

In November-December 1967, salinity values increased with depth from the surface, reaching a maximum value at approximately 110 m. Between January and May 1968, the water column was essentially isohaline in the top 200 m. During the summer months from early June to the middle of August 1968, salinity values were highest at the surface and decreased with depth. In the last half of August 1968, a salinity maximum again occurred between 75 and 100 m, and by November 1968, it was found at depths between 120 and 170 m.

In addition to the annual temperature and salinity cycles, temperature and salinity cycles having periods of 2 to 3 months were noted at depths between 200 and 800 m. During each cycle, temperature and salinity values increased to a maximum during a 2- to 4-week period, before decreasing to minimum values 2 to 5 weeks later. Maximum values occurred on 26 January, 18 March, 5 May, 11 August, and 19 October 1968. The temperature difference between maximum and minimum values ranged from approximately 1.2 C° in May 1968 to 3.4 C in March 1968. The salinity difference ranged from 0.35% in May 1968 to 0.58% in March 1968. A possible explanation for the cycles was the periodic intrusion of warmer, more saline Gulf Stream water through ECHO caused by meandering of the current.

Two principal water masses were observed in the top 1,500 m of the water column at Ocean Station ECHO. North Atlantic Central Water, characterized by a nearly straight T-S curve between the points T=8°C, S=35.10‰ and T=19°C, S=36.70‰ (Sverdrup et al. 1942, p. 668), was present at depths from 200 m to about 800 m.

At intermediate depths (800–1,500 m) the water mass present at ocean station ECHO is a mixture of variable quantities of at least two defined masses; Mediterranean Water and North Atlantic Deep Water. Wust (1936) called this intermediate mass Upper North Atlantic Deep Water in his discussion of the "Meteor" data, and Defant (1961, p. 692) constructed a standard curve (T–S) to show the percentage of Mediterranean Water present in the mass. The form of the T–S curves constructed from data collected on ECHO (figs. 45-57) clearly showed the influence of Mediterranean Water,

characterized by its high salinity. This influence was particularly strong during the May-June 1968 occupation (fig. 51) when the water mass at intermediate depths was made up of approximately 35 percent Mediterranean Water, as computed from Defant's standard curve.

Ocean Station ECHO was occupied during the passage of hurricane BRENDA from 18–26 June 1968. BRENDA maintained huricane intensity for little more than a day, with maximum surface winds of 65 knots occurring on 23 June 1968. The storm was downgraded to a tropical storm on 24 June, and passed 120 miles north of ECHO at 1300Z, 25 June 1968. The track of the storm center is shown in Figure 58. As the storm approached ECHO, a drop in sea surface temperature (21.98 to 21.03°C) occurred between 22 and 25 June 1968. Sea surface temperature remained near the low value until 1 July 1968, when it began to increase at

a rate of 0.35°C per day during the next 2 weeks. There was, however, no noticeable change in the surface salinity values during the passage of BRENDA.

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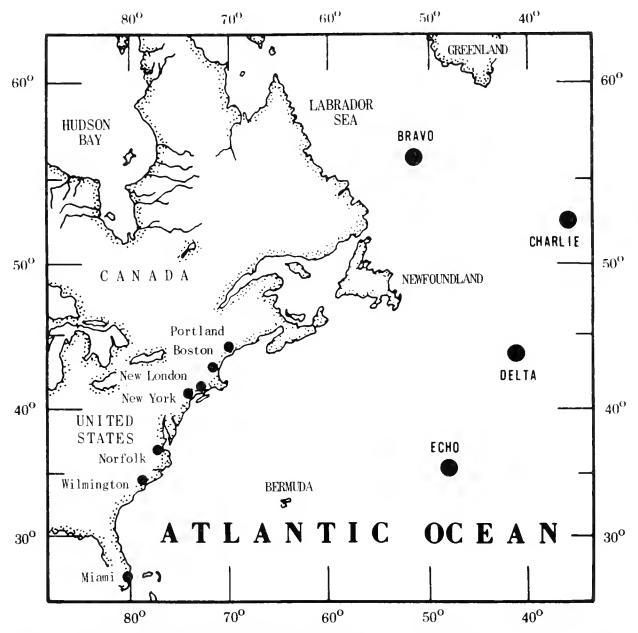


Figure 1. Chart showing the location of all North Atlantic Ocean Stations occupied by U.S. Coast Guard cutters.

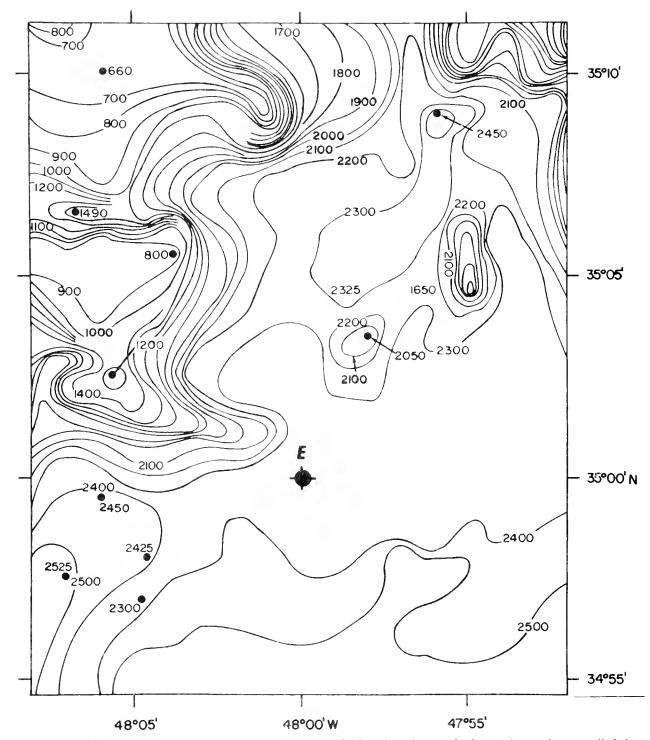


Figure 2. Bathymetry in the vicinity of Ocean Station ECHO, taken from a bathymetric overlay compiled for the U.S. Coast Guard by the U.S. Navy Hydrographic Office, December 1960.

(Soundings in fathoms, contour interval 100 fathoms.)

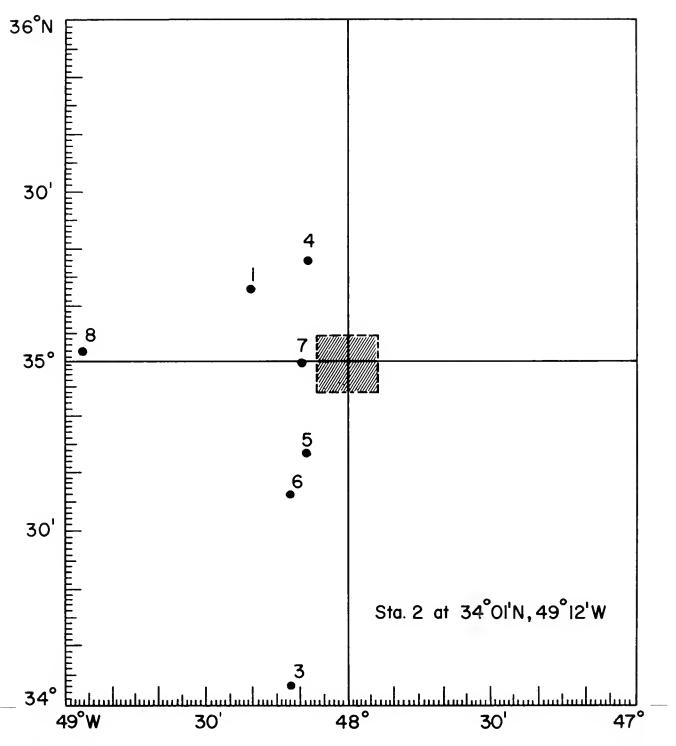


Figure 3. Positions of oceanographic stations taken by CGC CASTLE ROCK during 28 November-11 December 1967. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

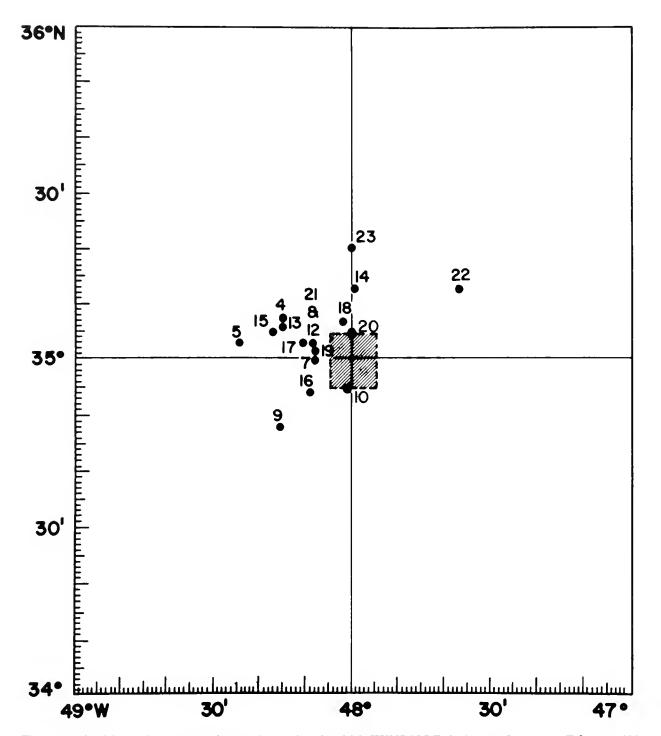


Figure 4. Positions of oceanographic stations taken by CGC HUMBOLDT during 10 January-1 February 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

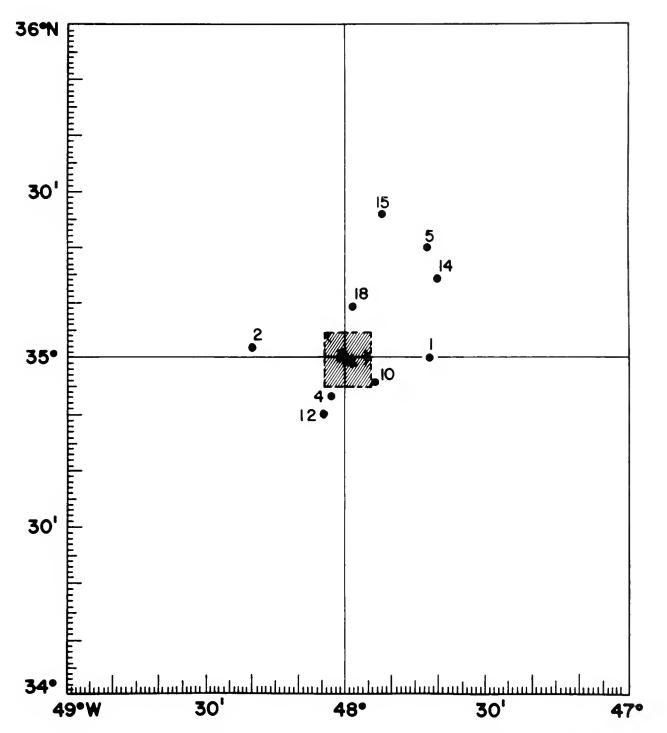


Figure 5. Positions of oceanographic stations taken by CGC ESCANABA during 29 February-19 March 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

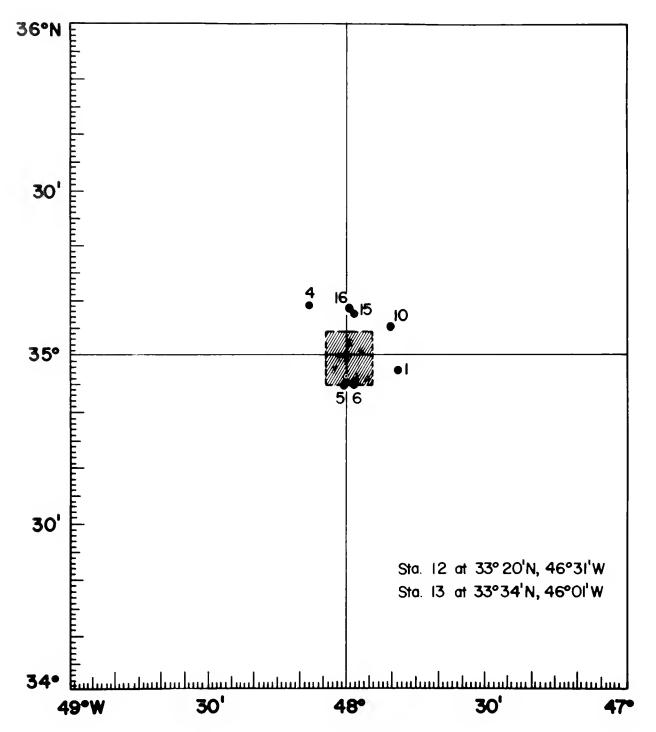


Figure 6. Positions of oceanographic stations taken by CGC MENDOTA during 12 April-4 May 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

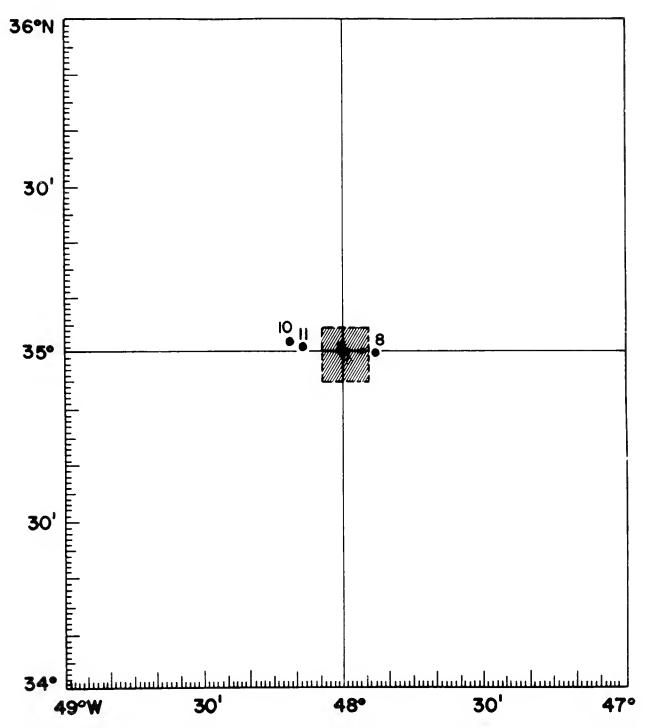


Figure 7. Positions of oceanographic stations taken by CGC CASCO during 5-27 May 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

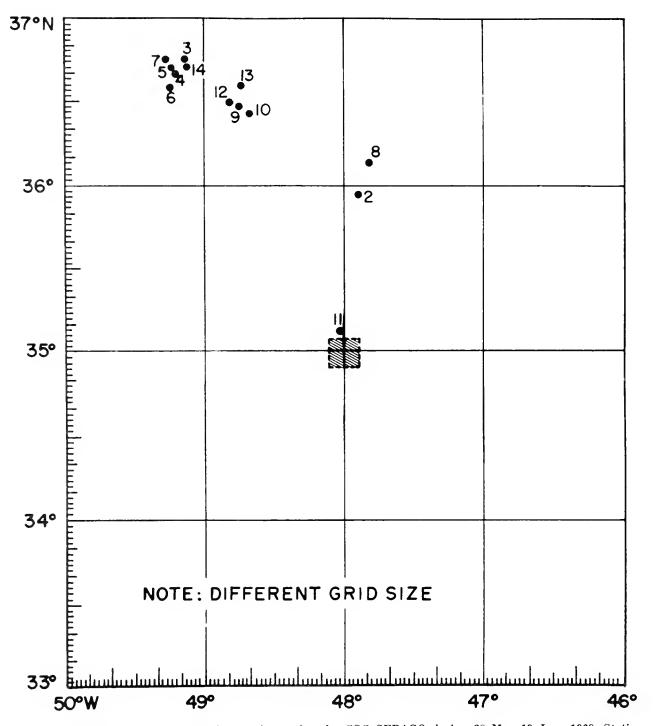


Figure 8. Positions of oceanographic stations taken by CGC SEBAGO during 28 May-19 June 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

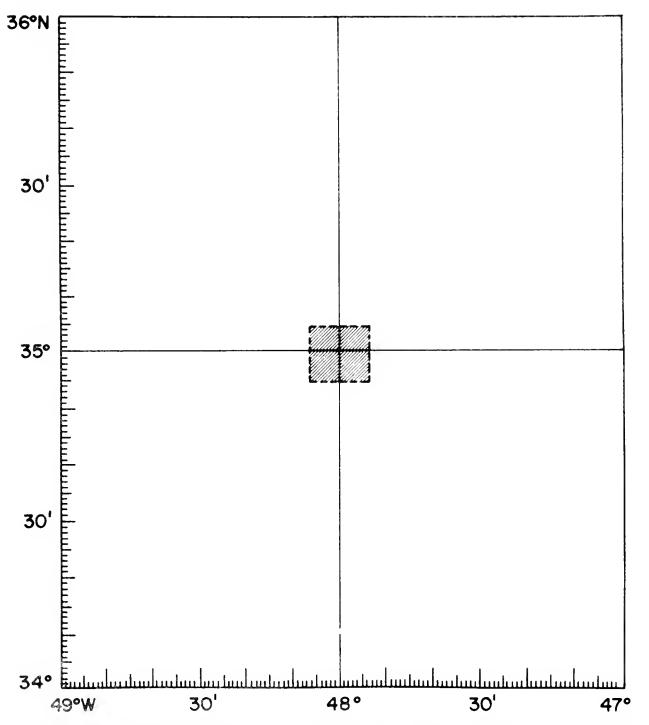


Figure 9. Positions of oceanographic stations taken by CGC HALF MOON during 20 June-12 July 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

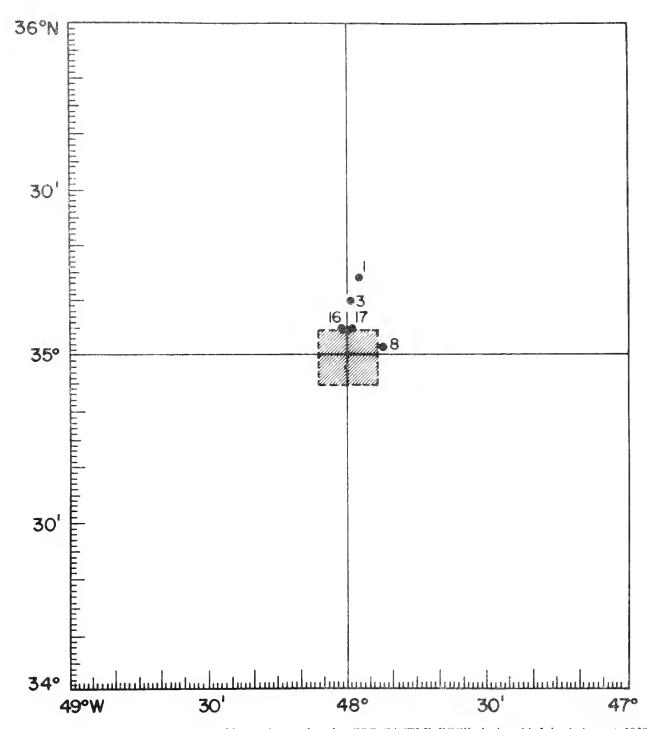


Figure 10. Positions of oceanographic stations taken by CGC CASTLE ROCK during 14 July-4 August 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

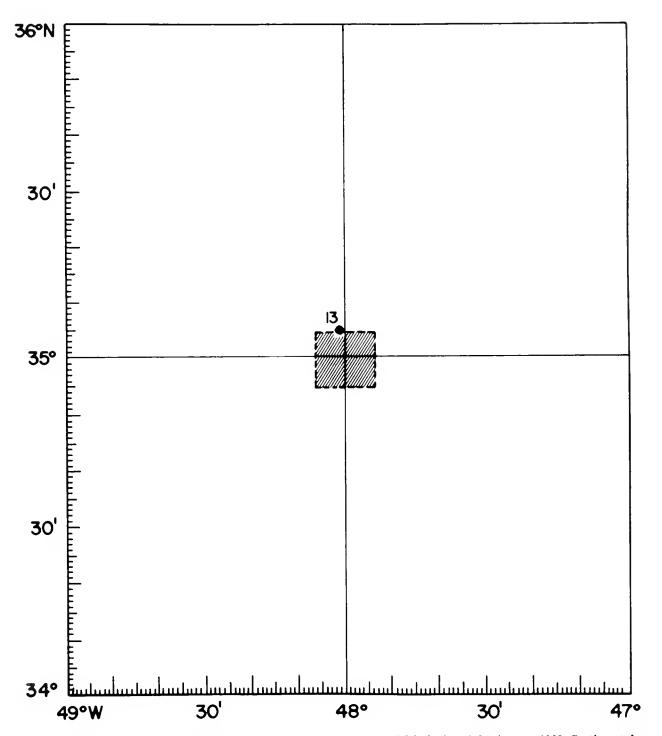


Figure 11. Positions of oceanographic stations taken by CGC SEBAGO during 5-27 August 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

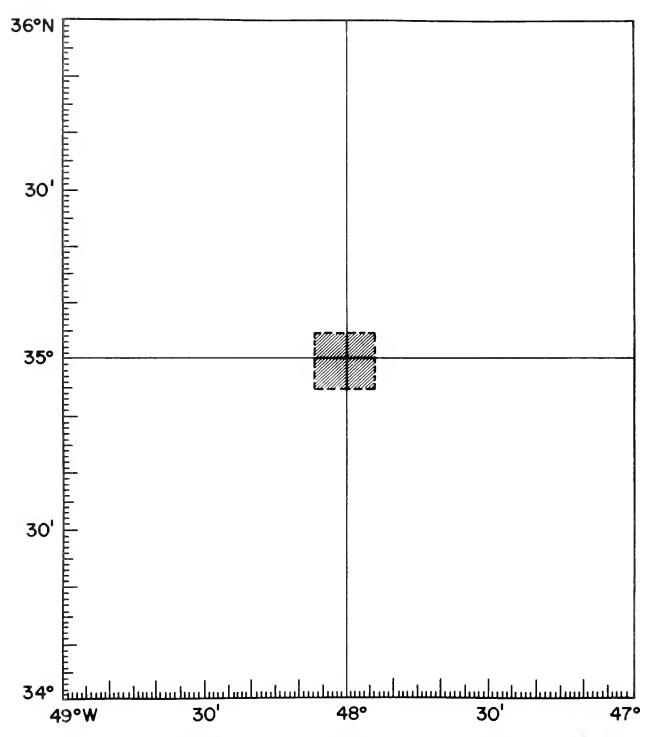


Figure 12. Positions of oceanographic stations taken by CGC CHASE during 1-22 September 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

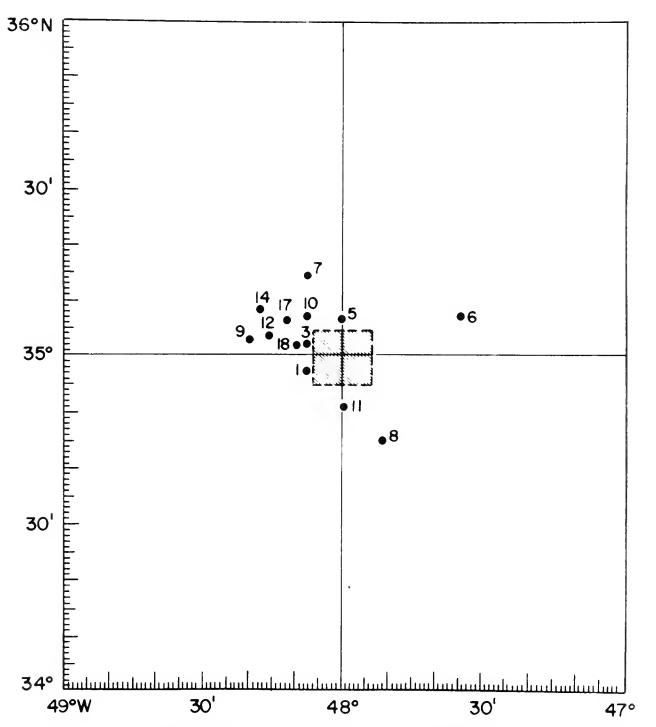


Figure 13. Positions of oceanographic stations taken by CGC DALLAS during 23 September-11 October 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

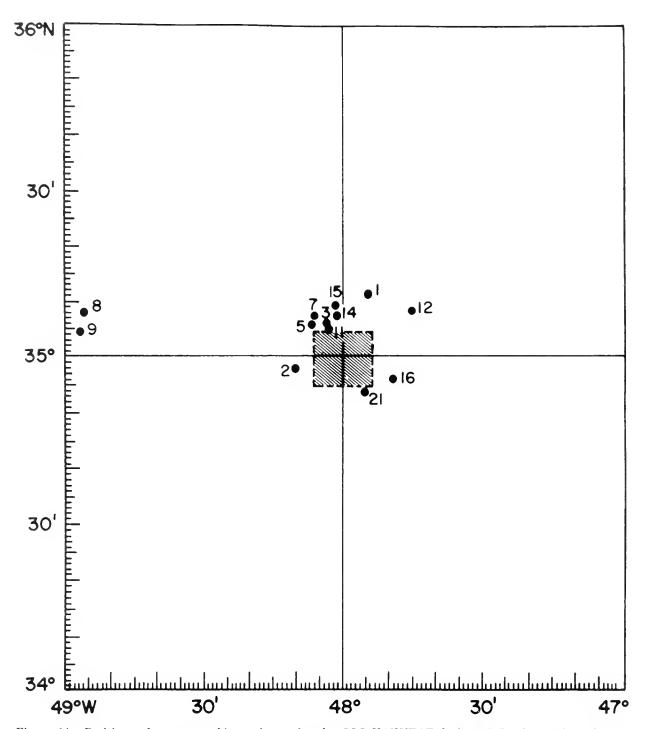


Figure 14. Positions of oceanographic stations taken by CGC YAKUTAT during 12 October-5 November 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

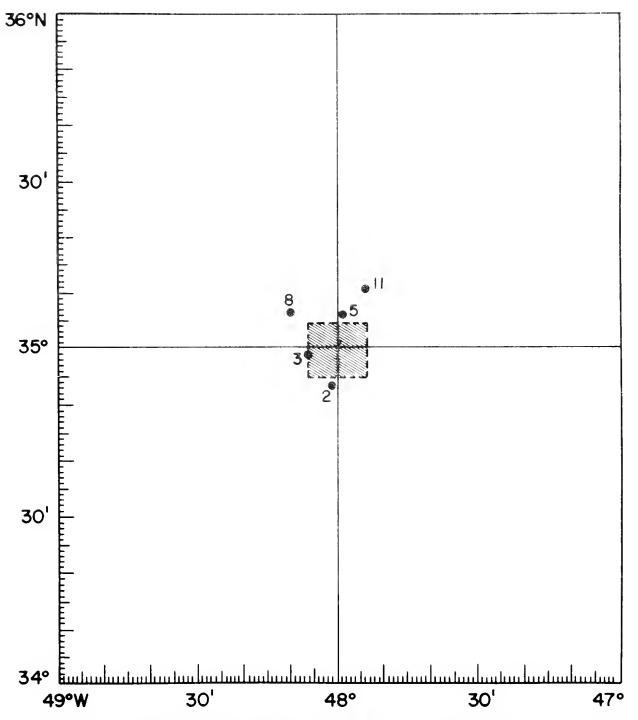


Figure 15. Positions of oceanographic stations taken by CGC MC CULLOCH during 6-25 November 1968. Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

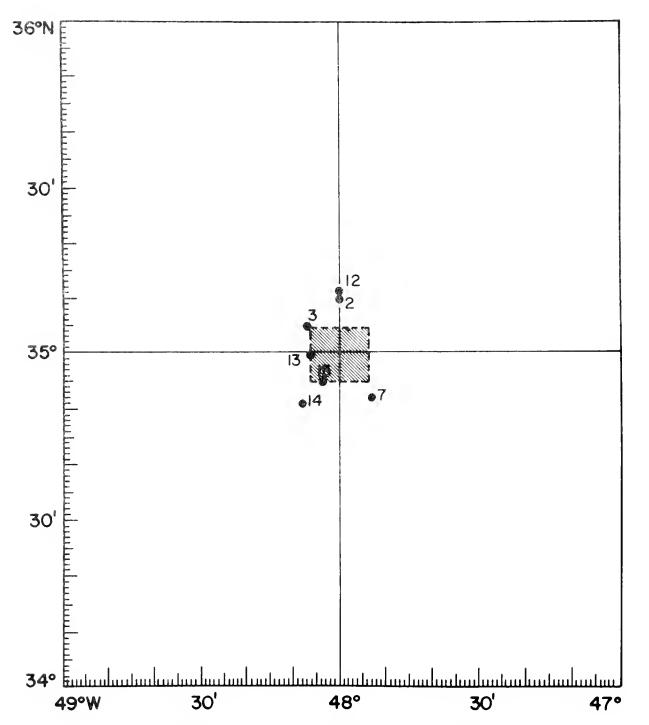


Figure 16. Positions of oceanographic stations taken by CGC BOUTWELL during 30 November-5 December 1968.

Stations taken inside the 10-mile-square central grid (shaded area) are not shown.

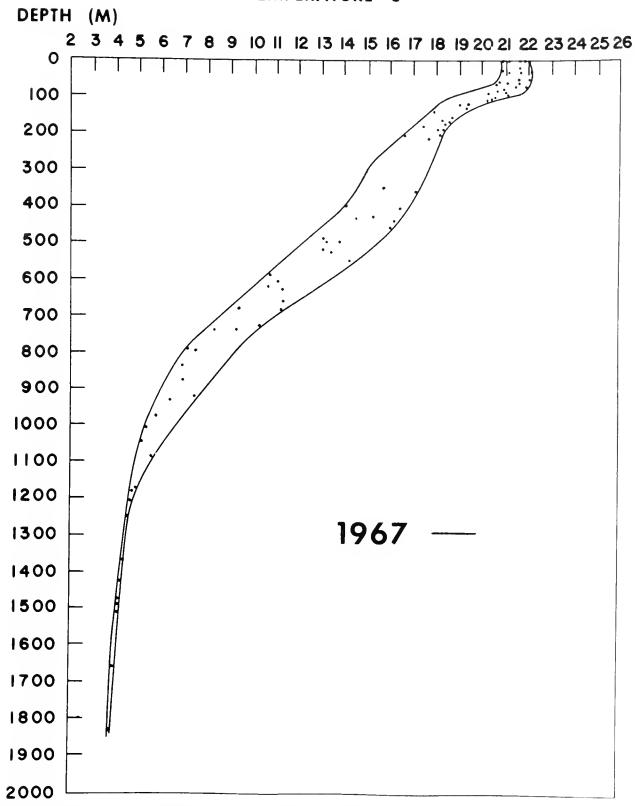


Figure 17. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC CASTLE ROCK at Ocean Station ECHO, 28 November-11 December 1967.

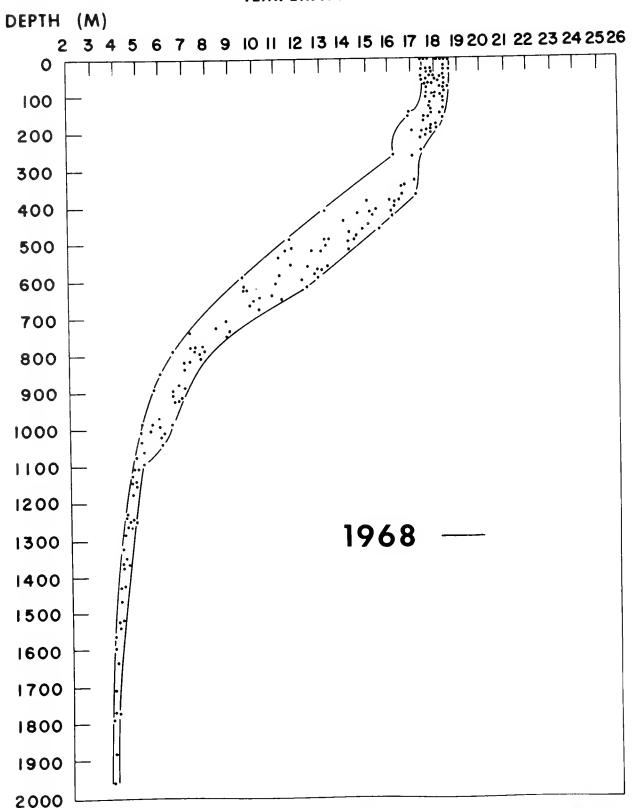


Figure 18. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC HUMBOLDT at Ocean Station ECHO, 10 January-1 February 1968.

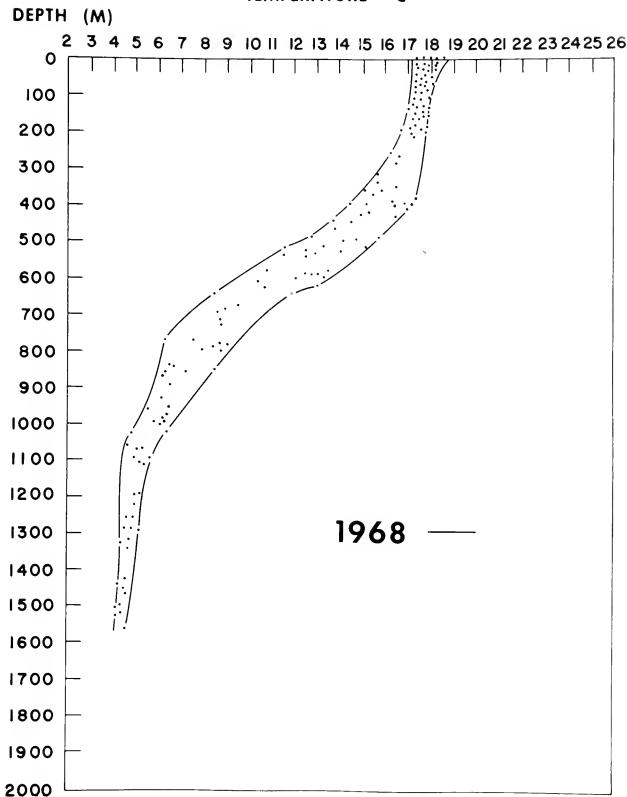


Figure 19. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC ESCANABA at Ocean Station ECHO, 29 February-19 March 1968.

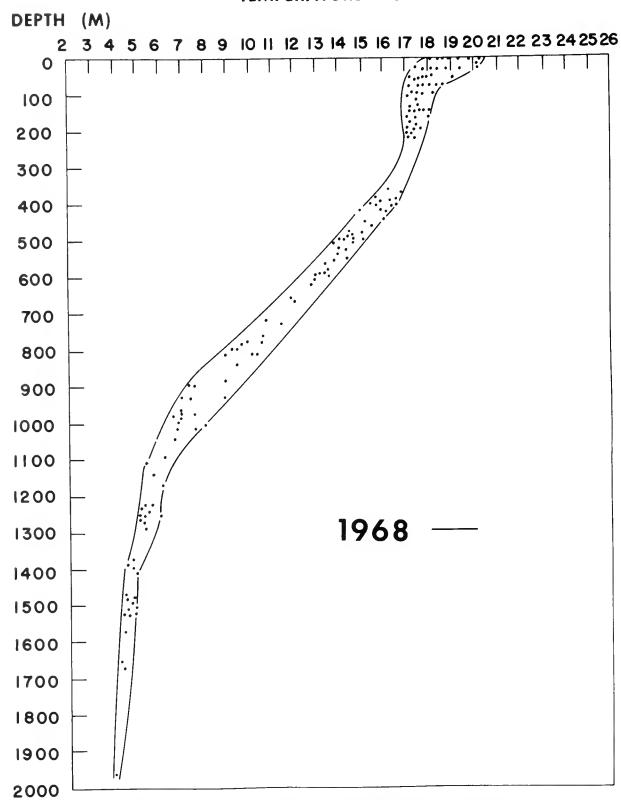


Figure 20. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC MENDOTA at Ocean Station ECHO, 12 April-4 May 1968.

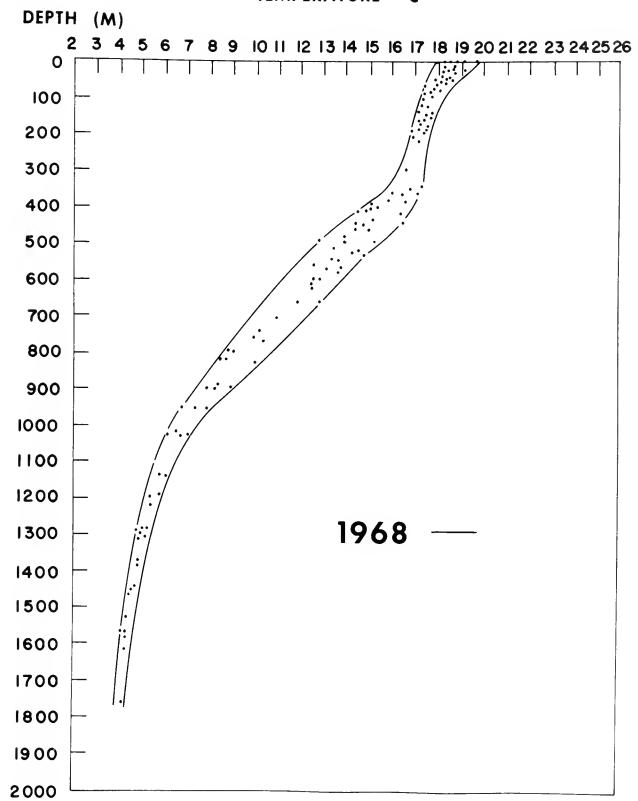


Figure 21. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC CASCO at Ocean Station ECHO, 5-27 May 1968.

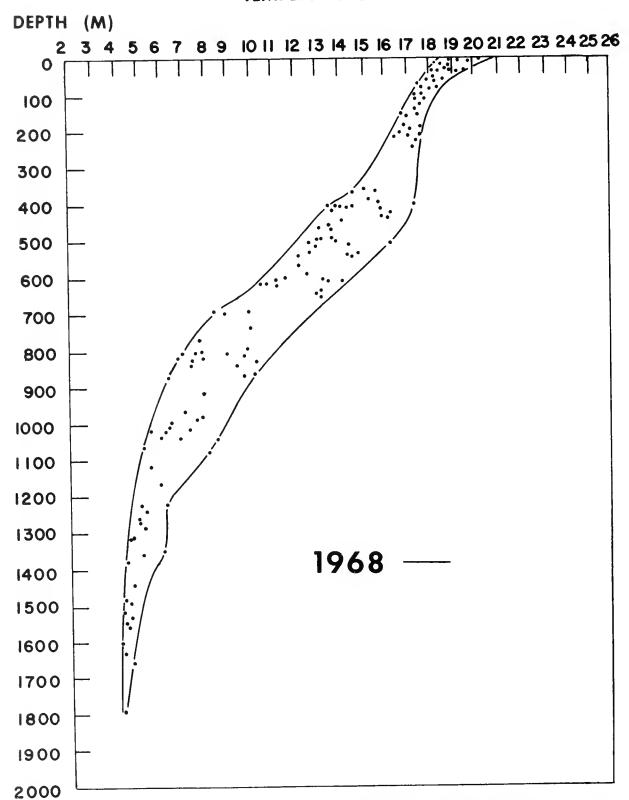


Figure 22. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC SEBAGO at Ocean Station ECHO, 28 May-19 June 1968.

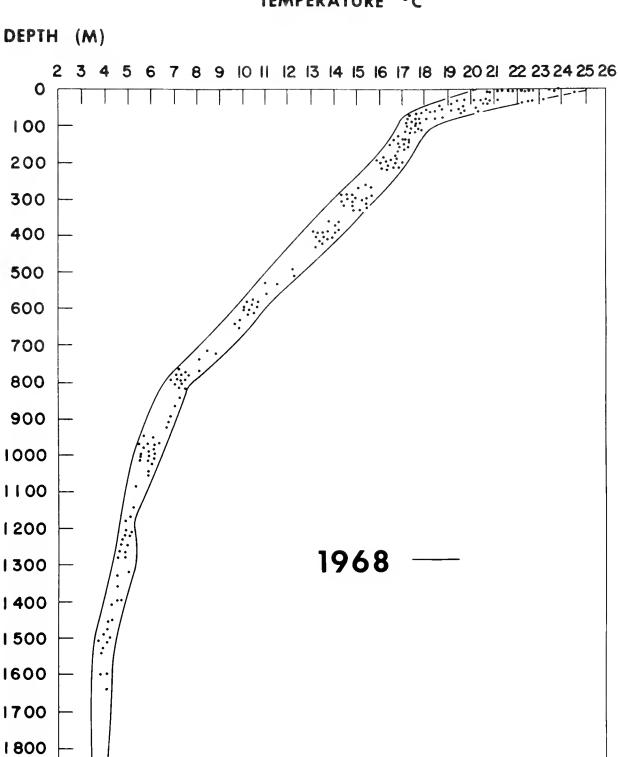


Figure 23. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC HALF MOON at Ocean Station ECHO, 20 June-12 July 1968.

1900

2000

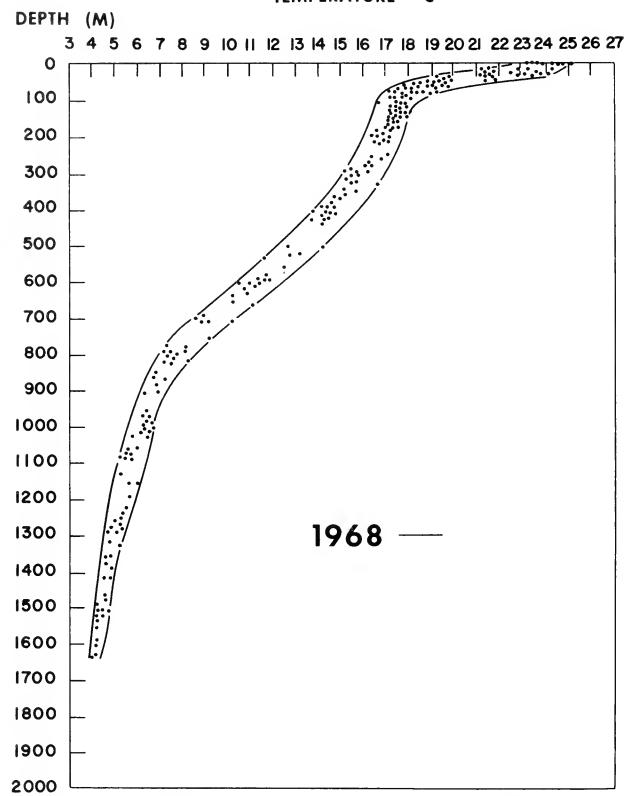


Figure 24. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC CASTLE ROCK at Ocean Station ECHO, 14 July-4 August 1968.

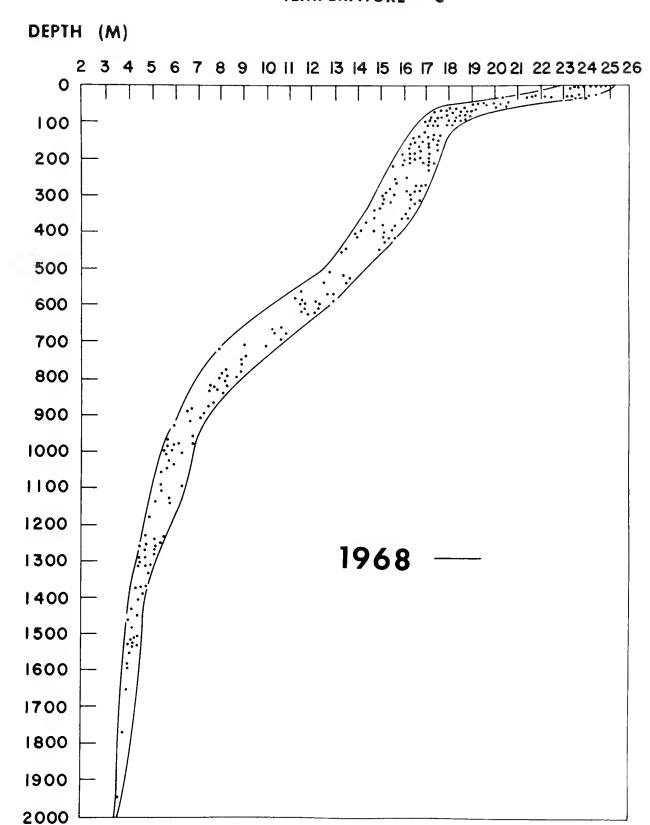


Figure 25. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC SEBAGO at Ocean Station ECHO, 5-27 August 1968.

DEPTH (M)

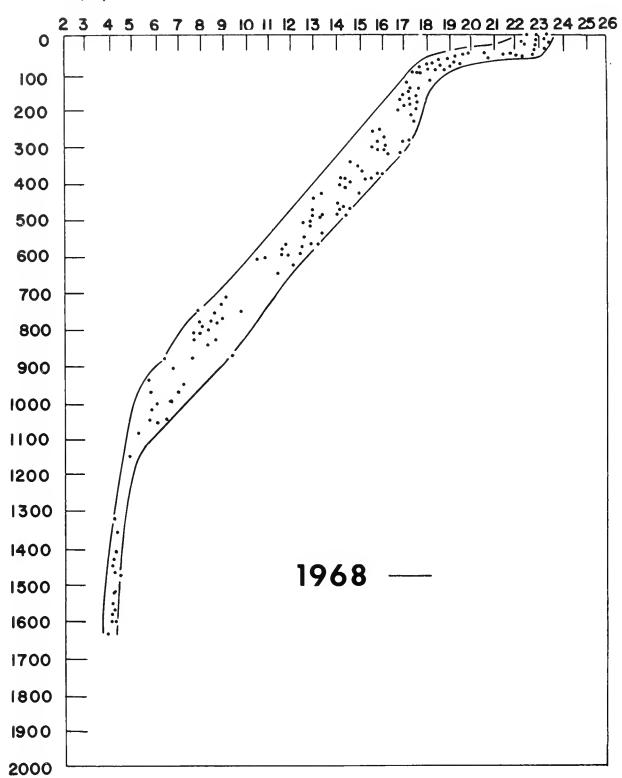


Figure 26. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC DALLAS at Ocean Station ECHO, 23 September-11 October 1968.

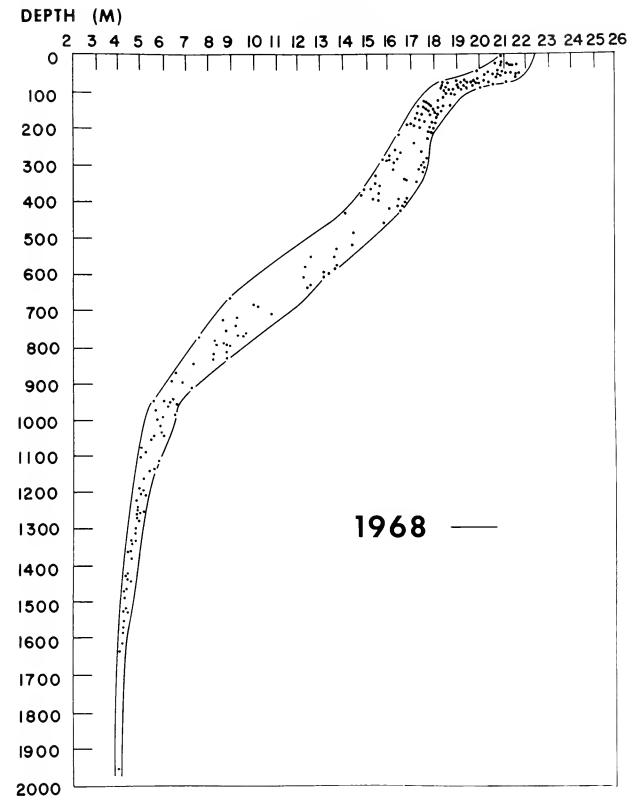


Figure 27. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC YAKUTAT at Ocean Station ECHO, 12 October-5 November 1968.

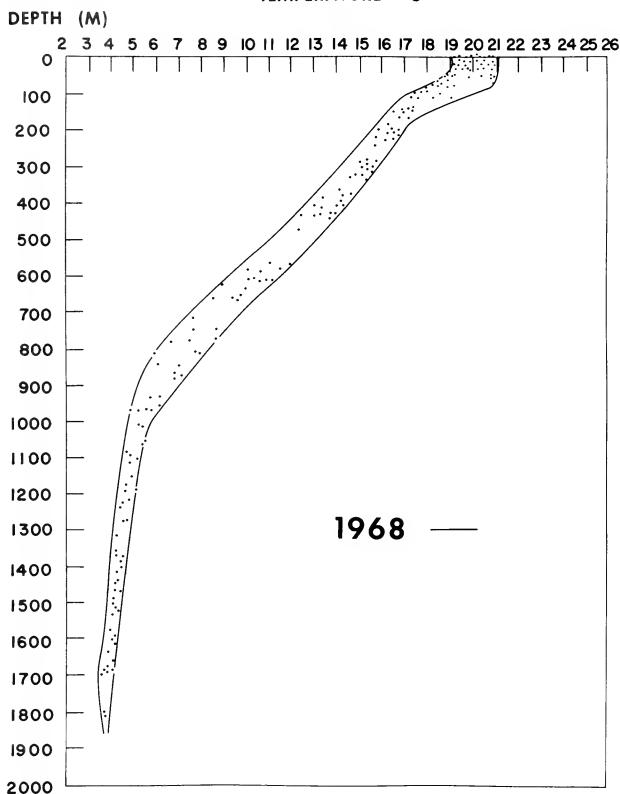


Figure 28. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC MC CULLOCH at Ocean Station ECHO, 6-25 November 1968.

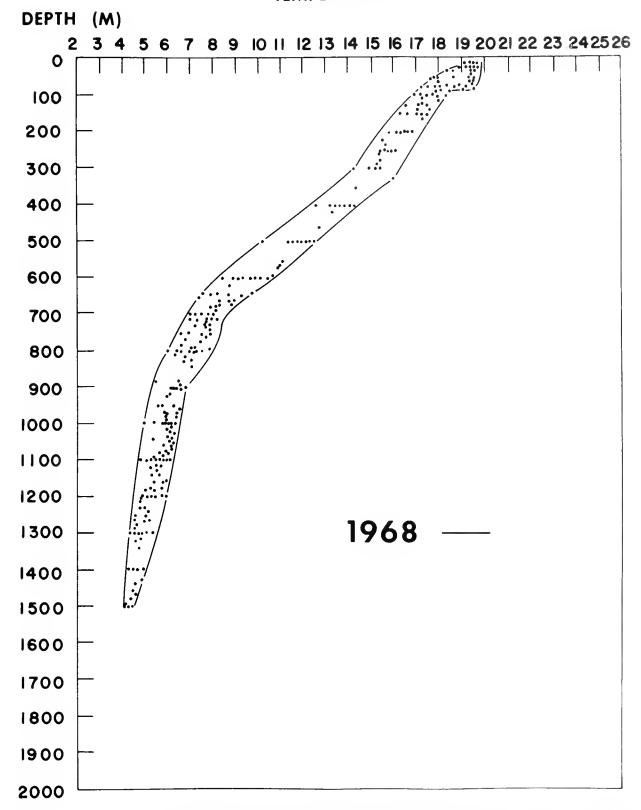


Figure 29. Envelope of temperature (°C) versus depth (m) at oceanographic stations taken by CGC BOUTWELL at Ocean Station ECHO, 30 November-5 December 1968.



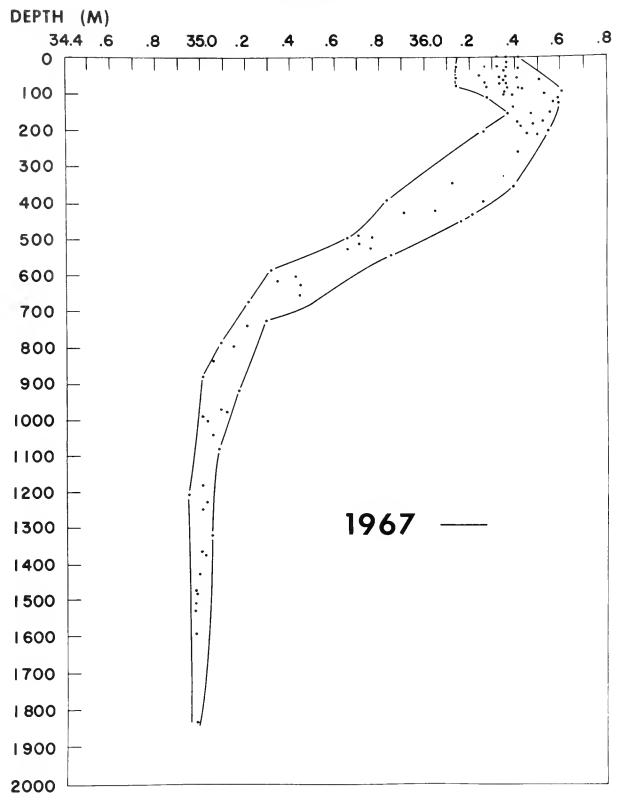
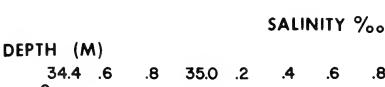


Figure 30. Envelope of salinity (%) versus depth (m) at oceanographic stations taken by CGC CASTLE ROCK at Ocean Station ECHO, 28 November-11 December 1967.



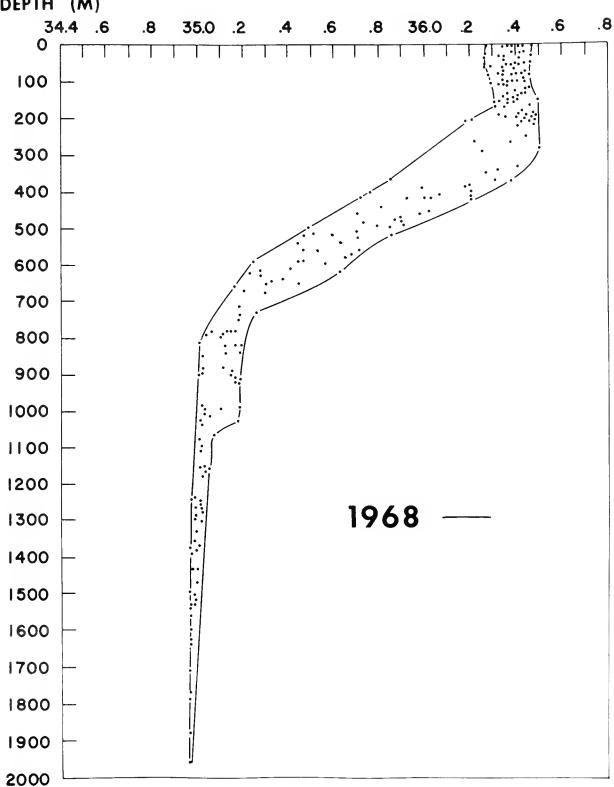


Figure 31. Envelope of salinity (‰) versus depth (m) at oceanographic stations taken by CGC HUMBOLDT at Ocean Station ECHO, 10 January-1 February 1968.

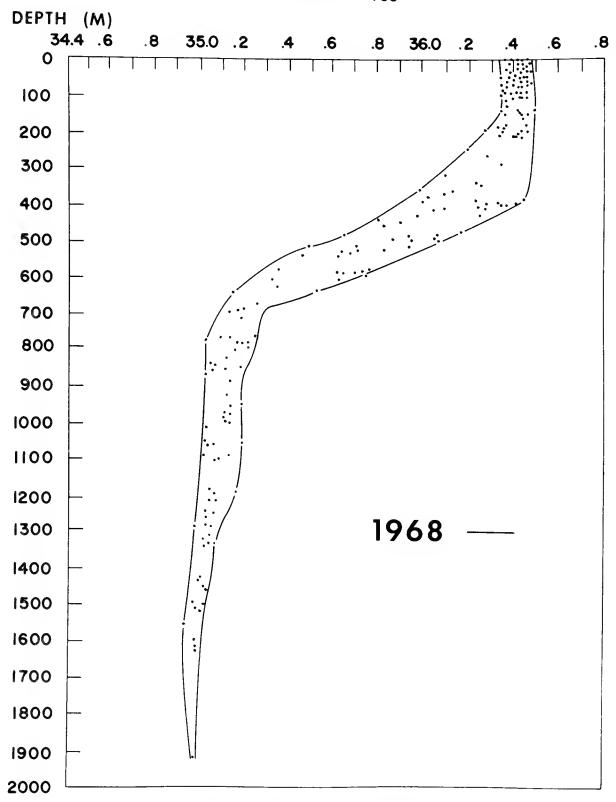


Figure 32. Envelope of salinity (‰) versus depth (m) at oceanographic stations taken by CGC ESCANABA at Ocean Station ECHO, 29 February-19 March 1968.



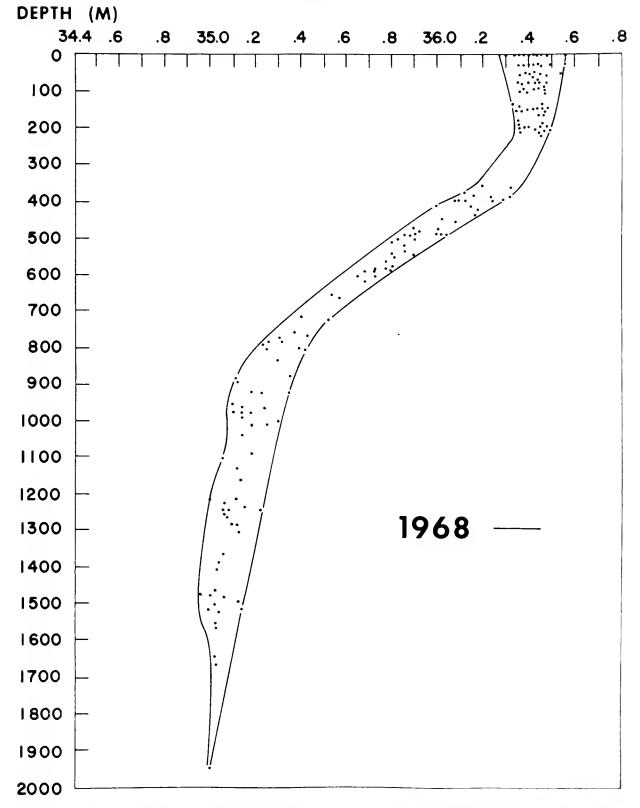


Figure 33. Envelope of salinity (‰) versus depth (m) at oceanographic stations taken by CGC MENDOTA at Ocean Station ECHO, 12 April-4 May 1968.



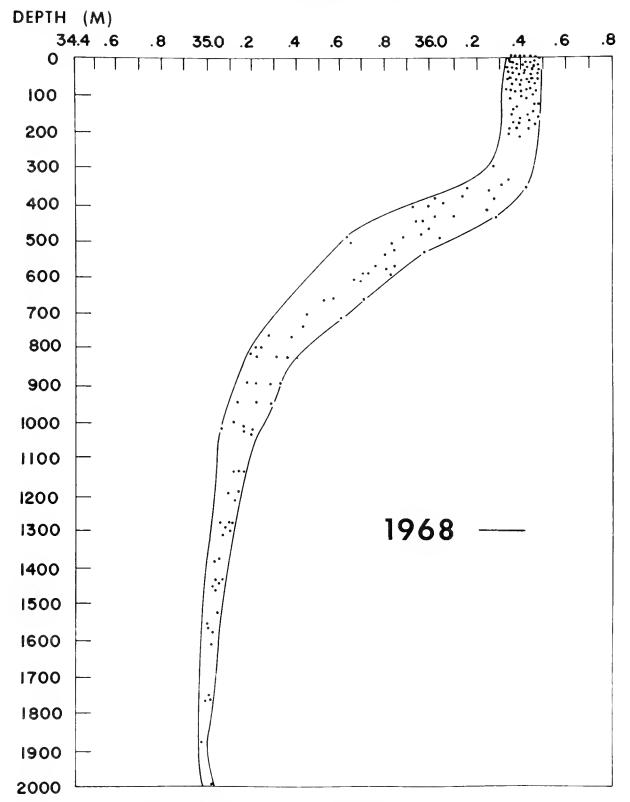


Figure 34. Envelope of salinity (‰) versus depth (m) at oceanographic stations taken by CGC CASCO at Ocean Station ECHO, 5-27 May 1968.



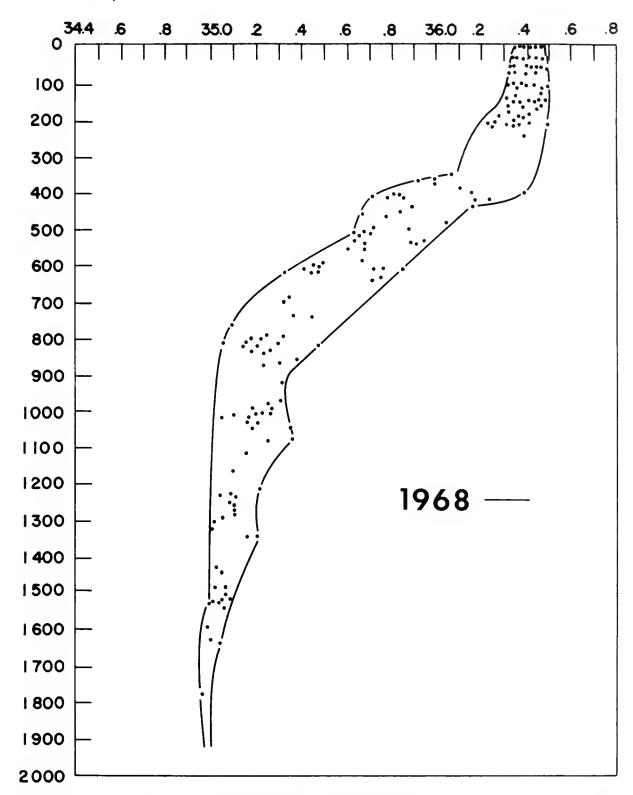


Figure 35. Envelope of salinity (‰) versus depth (m) at oceanographic stations taken by CGC SEBAGO at Ocean Station ECHO, 28 May-19 June 1968.



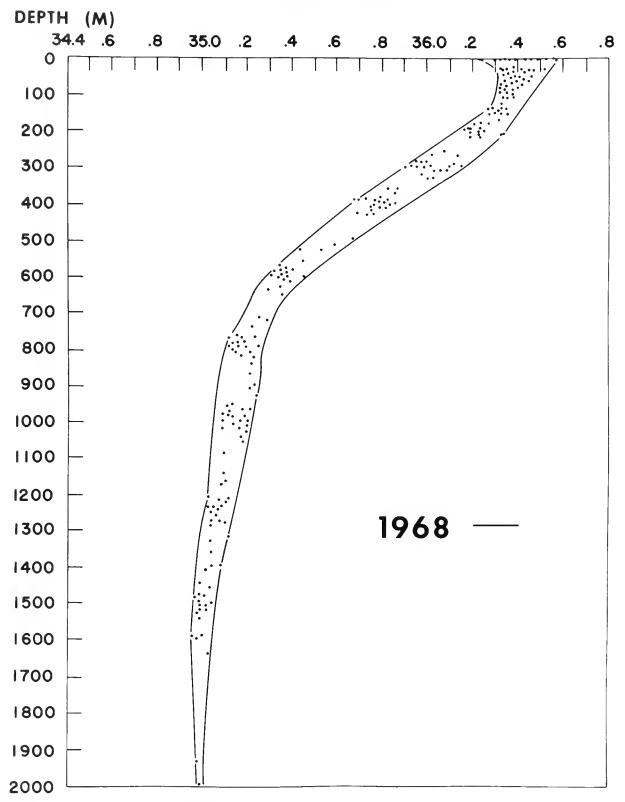


Figure 36. Envelope of salinity (‰) versus depth (m) at oceanographic stations taken by CGC HALF MOON at Ocean Station ECHO, 20 June-12 July 1968.

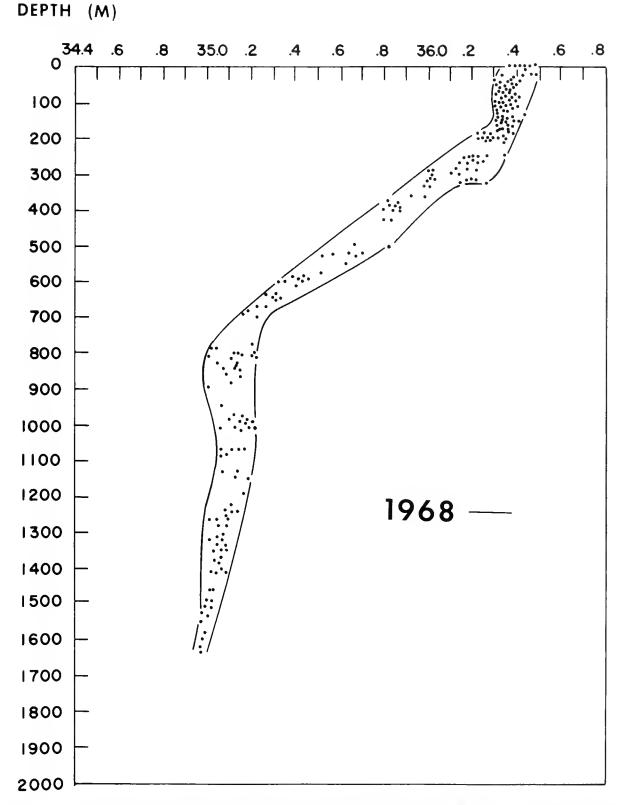


Figure 37. Envelope of salinity (‰) versus depth (m) at oceanographic stations taken by CGC CASTLE ROCK at Ocean Station ECHO, 14 July-4 August 1968.



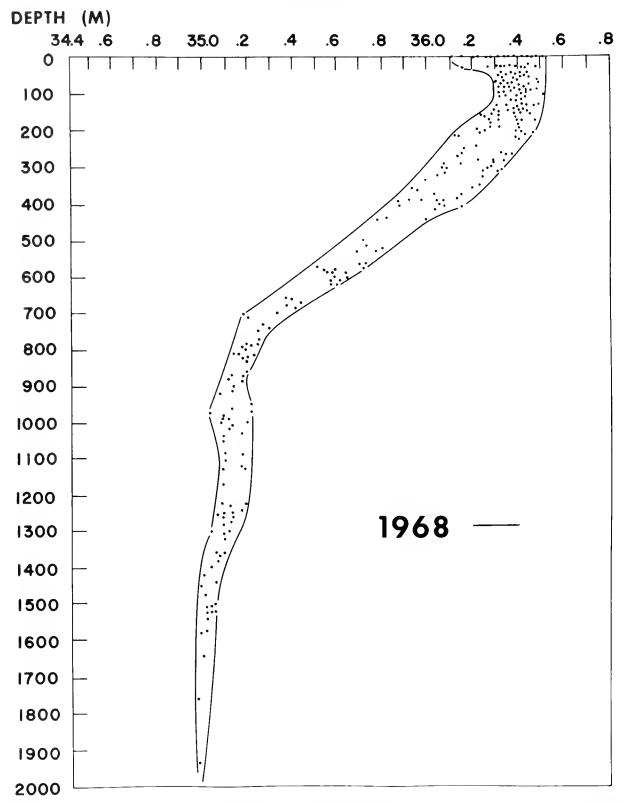


Figure 38. Envelope of salinity (%) versus depth (m) at oceanographic stations taken by CGC SEBAGO at Ocean Station ECHO, 5-27 August 1968.

## **SALINITY** %...



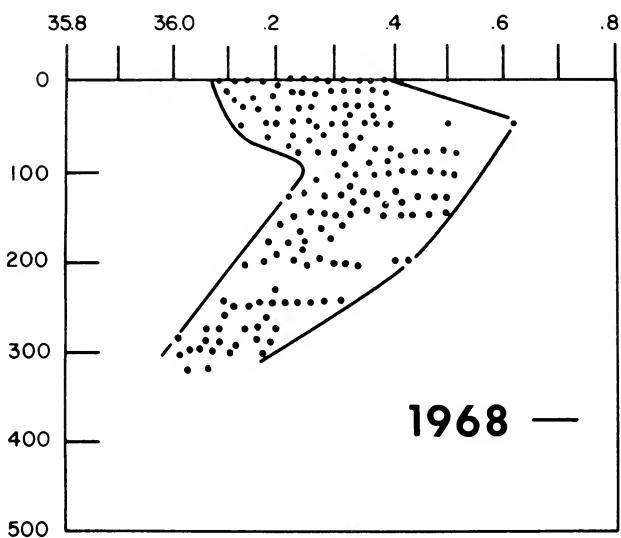


Figure 39. Envelope of salinity (%) versus depth (m) at oceanographic stations taken by CGC CHASE at Ocean Station ECHO, 1-22 September 1968.

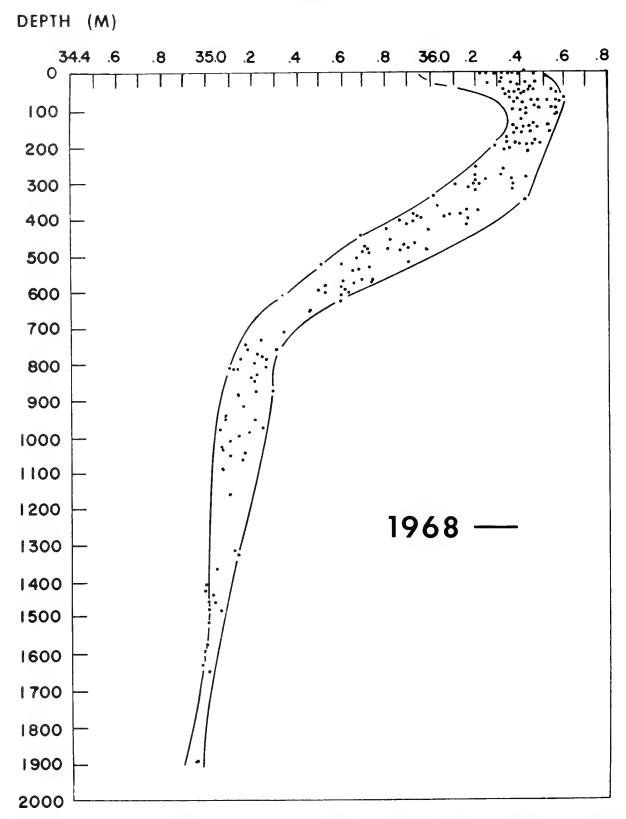


Figure 40. Envelope of salinity (‰) versus depth (m) at oceanographic stations taken by CGC DALLAS at Ocean Station ECHO, 23 September-11 October 1968.



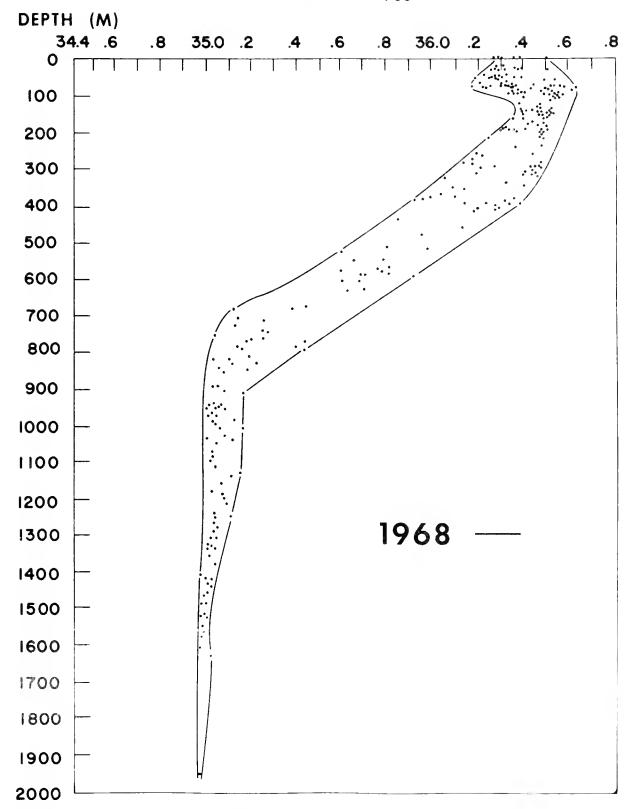


Figure 41. Envelope of salinity (‰) versus depth (m) at oceanographic stations taken by CGC YAKUTAT at Ocean Station ECHO, 12 October-5 November 1968.



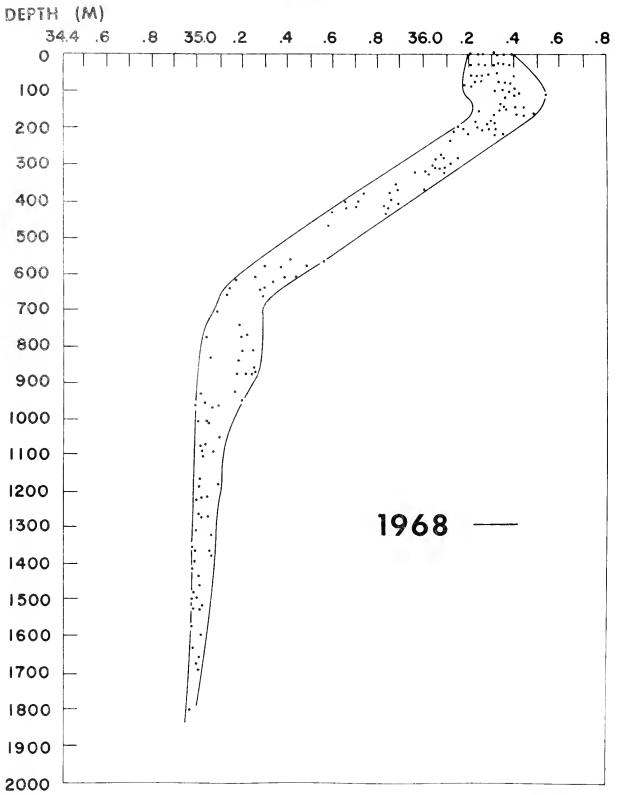


Figure 42. Envelope of salinity (%) versus depth (m) at oceanographic stations taken by CGC MC CULLOCH at Ocean Station ECHO, 6-25 November 1968.



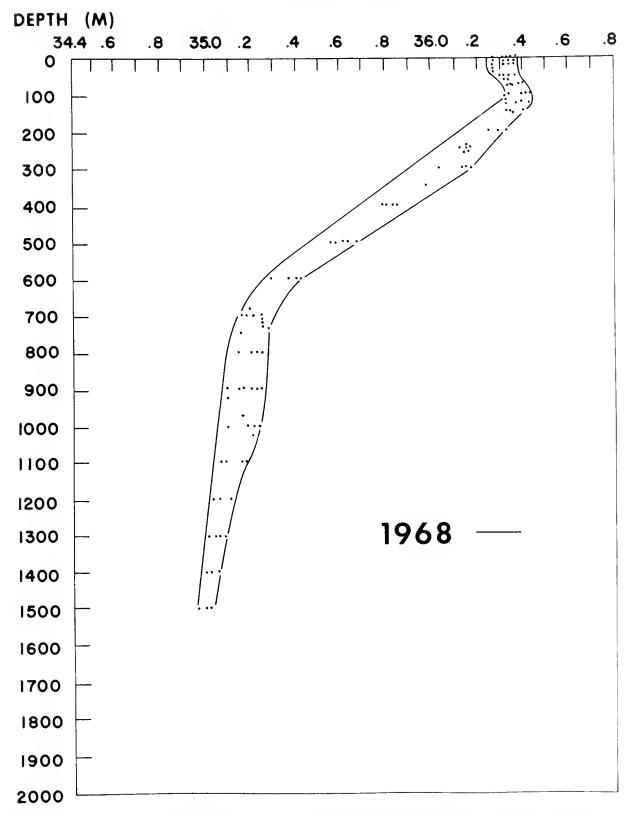
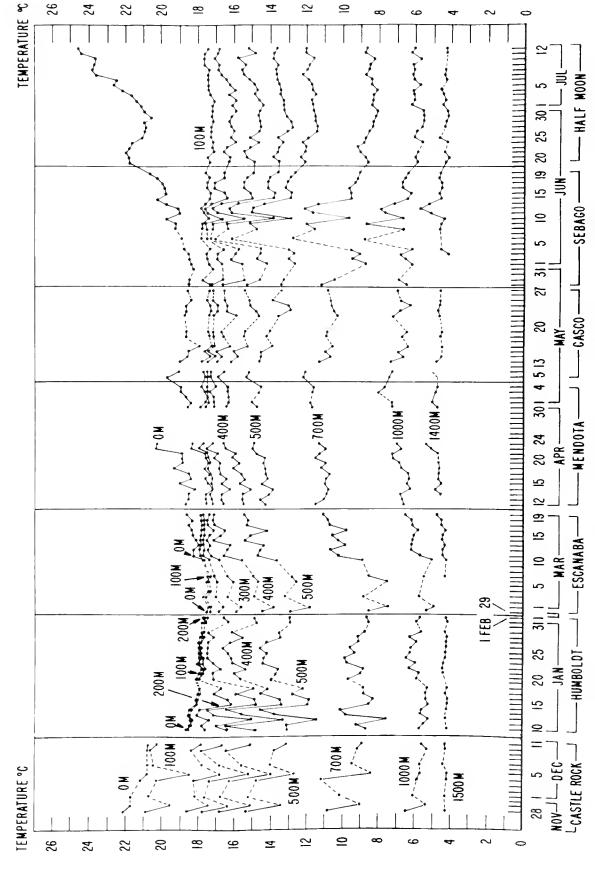


Figure 43. Envelope of salinity (‰) versus depth (m) at oceanographic stations taken by CGC BOUTWELL at Ocean Station ECHO, 30 November-5 December 1968.

# WATER TEMPERATURE VERSUS TIME AT OCEAN STATION ECHO

28 NOVEMBER 1967 — 12 JULY 1968



14 JULY - 5 DECEMBER 1968

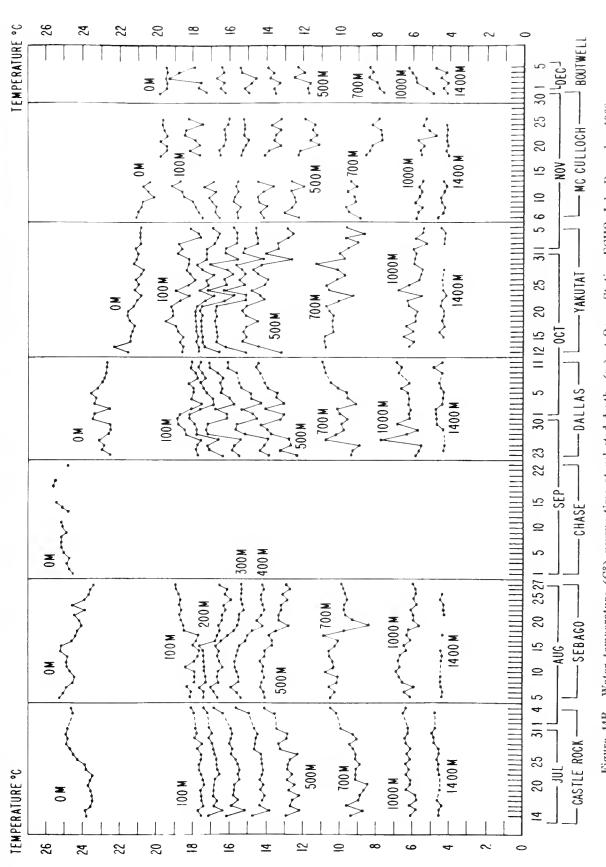
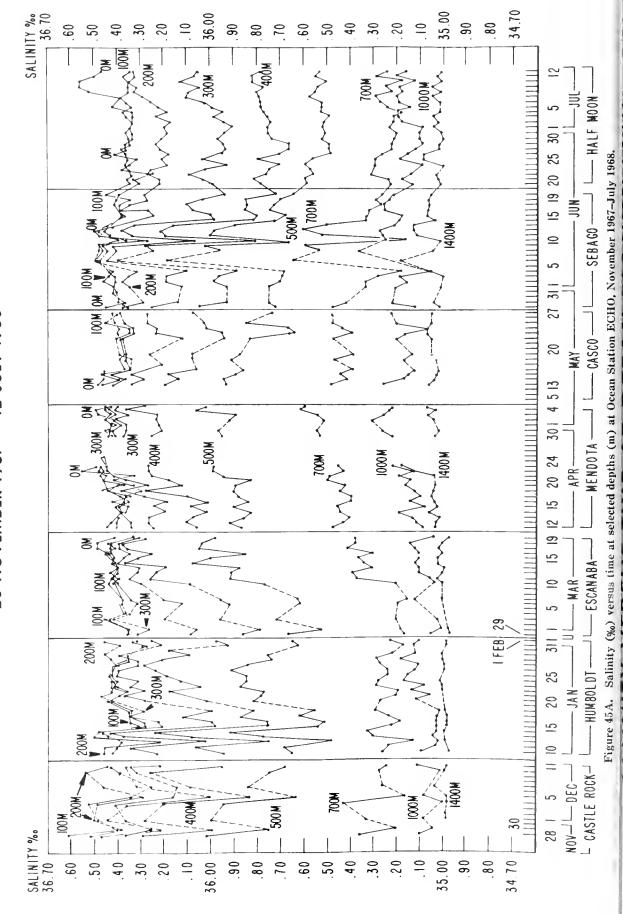


Figure 44B. Water temperature (C°) versus time at selected depths (m) at Ocean Station ECHO, July-December 1968.

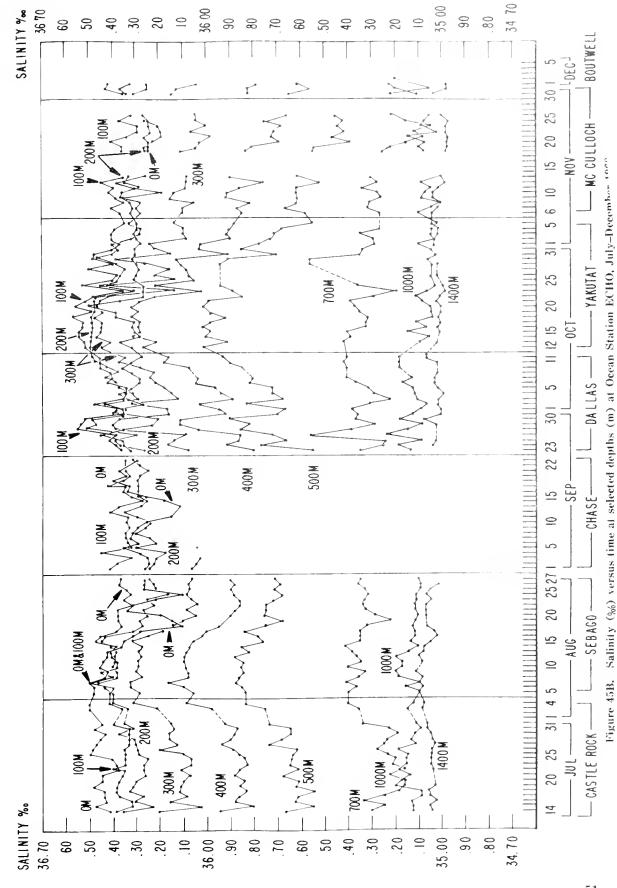
## VERSUS TIME AT OCEAN STATION ECHO

28 NOVEMBER 1967 — 12 JULY 1968



## ECHO STATION AT OCEAN TIME VERSUS

5 DECEMBER 1968



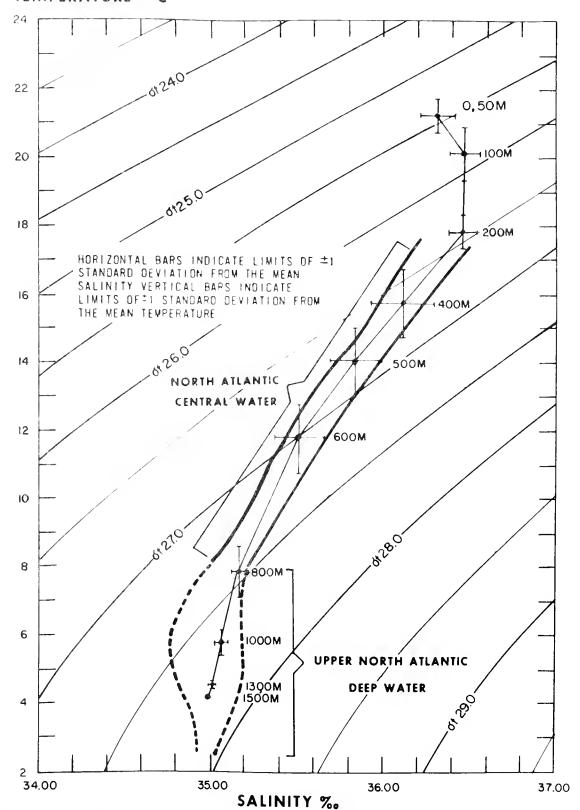


Figure 46. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC CASTLE ROCK at Ocean Station ECHO, 28 November-11 December 1967 (8 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water (UNADW).

## **TEMPERATURE** 24 22 HORIZONTAL BARS INDICATE LIMITS OF ±1 STANDARD DEVIATION FROM THE MEAN SALINITY VERTICAL BARS INDICATE LIMITS OF 1 STANDARD DEVIATION FROM THE MEAN TEMPERATURE 20 0,50,100M 18 200M 16 14 NORTH ATLANTIC 500**M** CENTRAL 12 600M 10 8 800M 6 1000M UPPER NORTH ATLANTIC 1300M WATER 4 500M

Figure 47. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC HUMBOLDT at Ocean Station ECHO, 10 January-1 February 1968 (23 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water (UNADW).

SALINITY

36.00

%.

35.00

34.00

37.00

Figure 48. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC ESCANABA at Ocean Station ECHO, 29 February-19 March 1968 (18 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water (UNADW).

SALINITY

36.00

%.

35.00

37.00

2

34.00

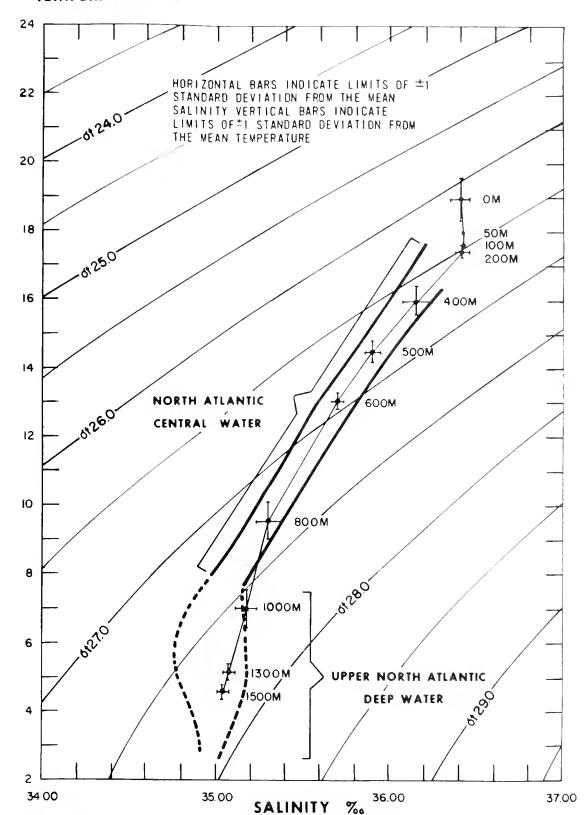


Figure 49. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC MENDOTA at Ocean Station ECHO, 12 April-4 May 1968 (18 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water Water (UNADW).

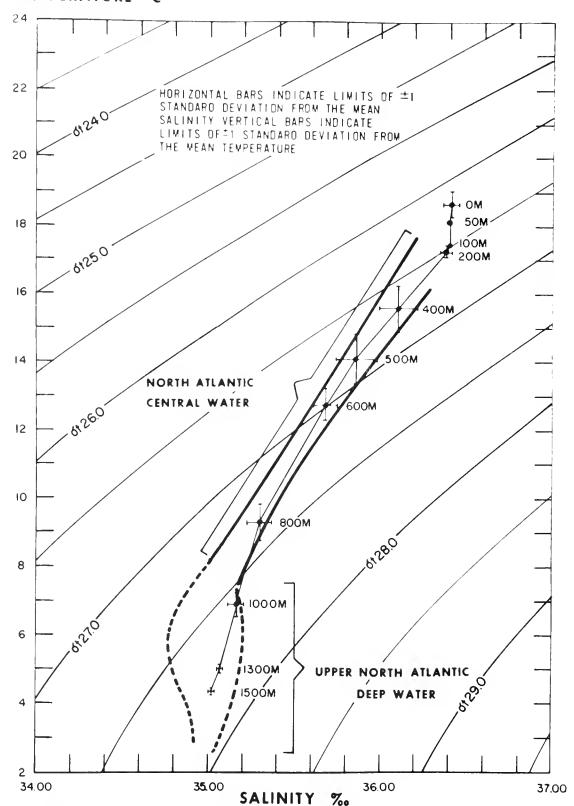


Figure 50. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC CASCO at Ocean Station ECHO, 5-27 May 1968 (13 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water (UNADW).

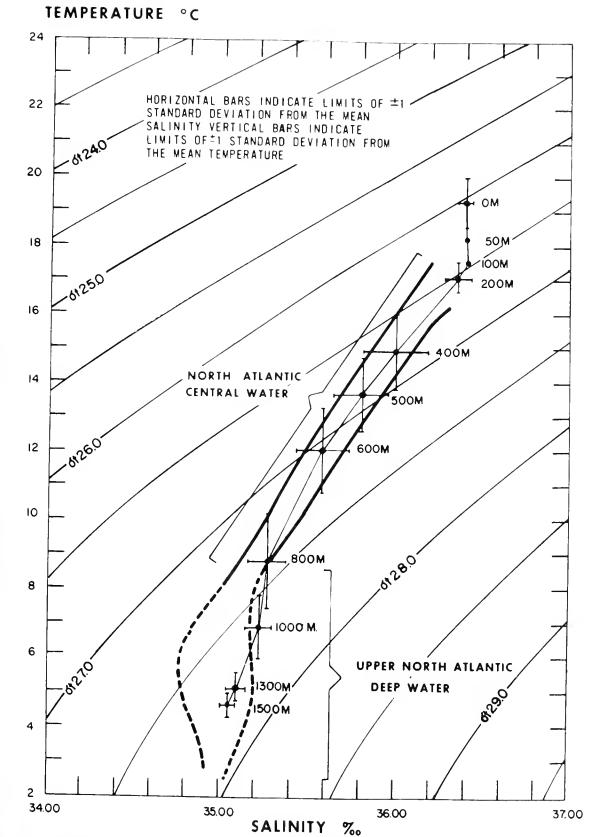


Figure 51. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC SEBAGO at Ocean Station ECHO, 28 May-19 June 1968 (20 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water (UNADW).

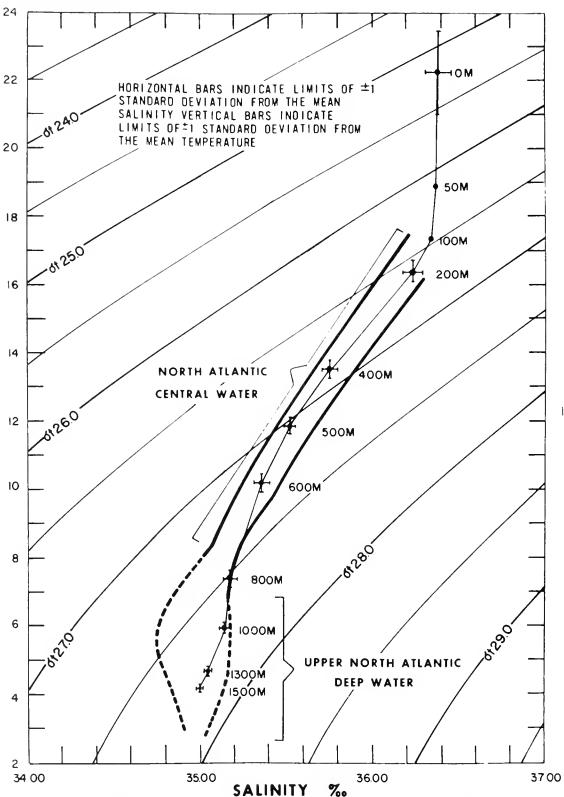


Figure 52. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC HALF MOON at Ocean Station ECHO, 20 June 12 July 1968 (23 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water (UNADW).

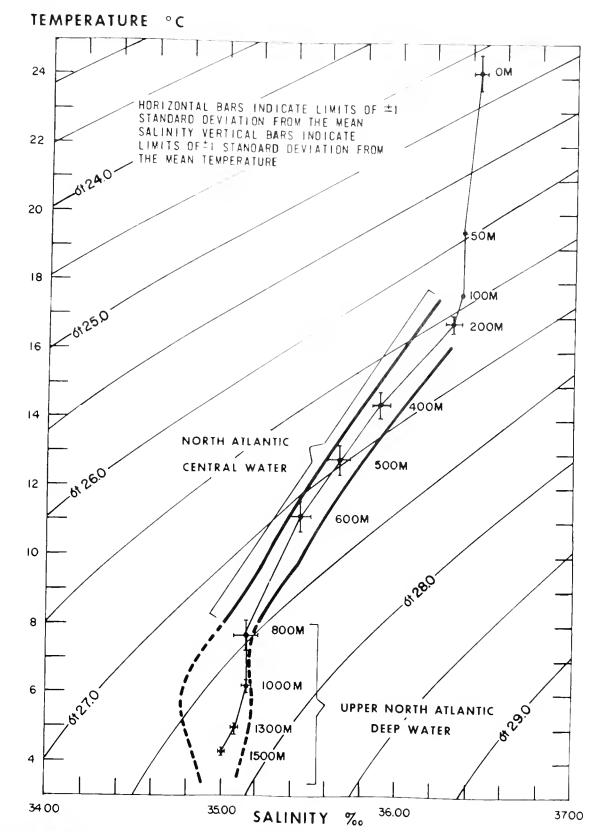


Figure 53. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC CASTLE ROCK at Ocean Station ECHO, 14 July-4 August 1968 (20 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water (UNADW).

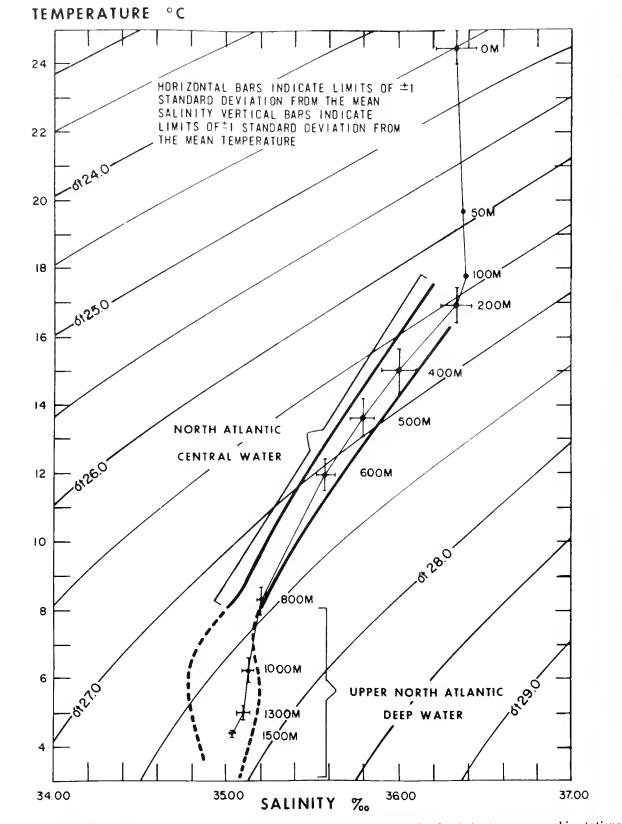


Figure 54. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC SEBAGO at Ocean Station ECHO, 5-27 August 1968 (23 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water (UNADW).

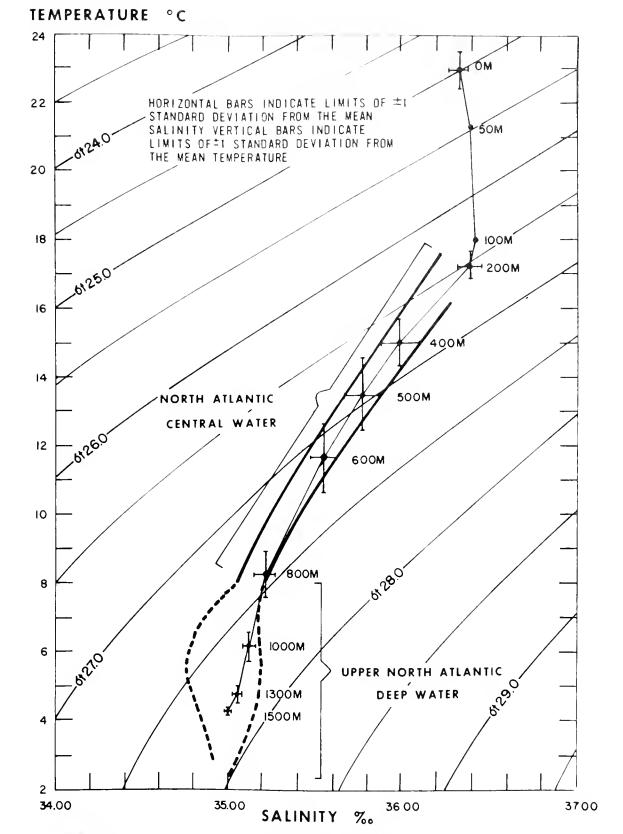


Figure 55. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC DALLAS at Ocean Station ECHO, 23 September-11 October 1968 (19 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water (UNADW).

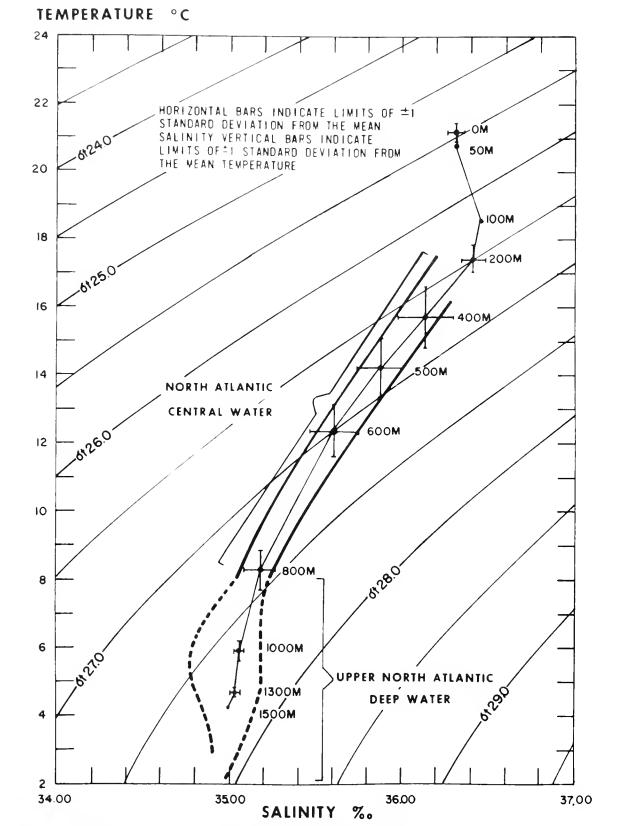


Figure 56. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC YAKUTAT at Ocean Station ECHO, 12 October-5 November 1968 (25 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep (UNADW).

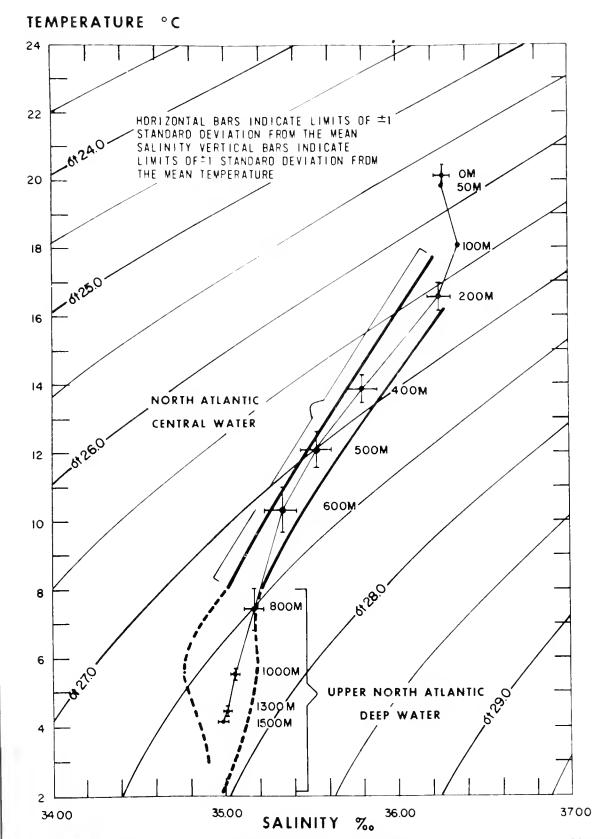


Figure 57. Mean temperature (°C) versus mean salinity (‰) at standard depths (m) at oceanographic stations taken by CGC MC CULLOCH at Ocean Station ECHO 6-25 November 1968 (16 stations). Horizontal and vertical bars indicate limits of ±1 standard deviation of salinity and temperature. Solid-line and dashed-line envelopes indicate defined limits of North Atlantic Central Water (NACW) and Upper North Atlantic Deep Water (UNADW).

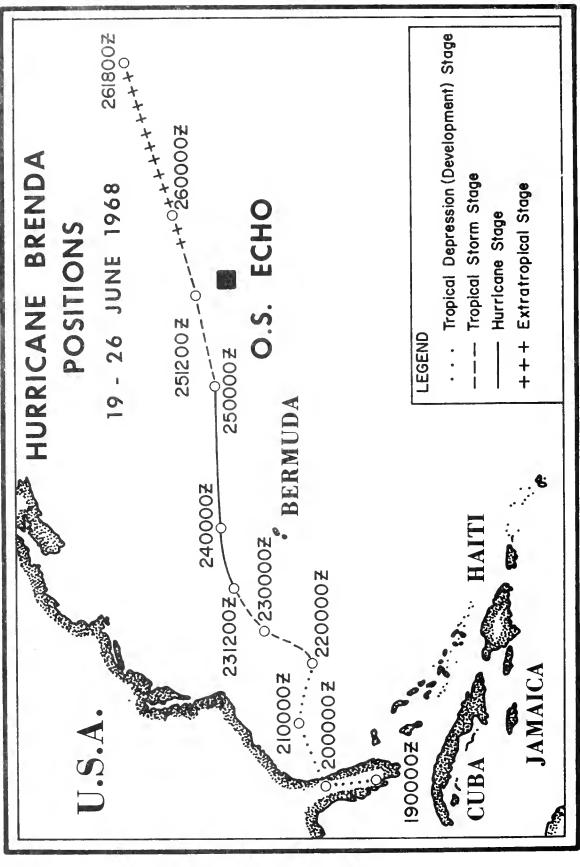


Figure 58. Storm track of hurricane BRENDA, 19-26 June 1968, taken from Annual Tropical Storm Report (OPNAV Report 3140-9), Fleet Weather Facility, Jacksonville, Fla.

# APPENDIX A

## Oceanographic Data

## Cruises Listed

Table		Page
I.	CGC CASTLE ROCK November-December 1967	
II.	CGC HUMBOLDT January-February 1968	
III.	CGC ESCANABA February-March 1968	
IV.	CGC MENDOTA April-May 1968	
V.	CGC CASCO May 1968	
VI.	CGC SEBAGO May-June 1968	
VII.	CGC HALF MOON June-July 1968	
VIII.	CGC CASTLE ROCK July-August 1968	
IX.	CGC SEBAGO August 1968	
X.	CGC CHASE August-September 1968	
XI.	CGC DALLAS September-October 1968	
XII.	CGC YAKUTAT October-November 1968	
XIII.	CGC MC CULLOCH November 1968	
XIV.	CGC BOUTWELL November-December 1968	

## Codes Utilized

A complete description of the codes utilized in the tabulation of oceanographic station data can be found in National Oceanographic Data Center publication M-2, Processing Physical and Chemical Data from Oceanographic Stations. (Rev. August 1964, supplement issued May 1966.)

To facilitate use of the oceanographic station data listing, entry headings which are not self-explanatory are described below.

explanatory are described	u below.
Depth to bottom	Corrected or uncorrected sounding in meters.
Max. depth of samples	Depth of deepest sample to nearest multiple of 100 meters.
Wave observations:	
Dir	Rounded to nearest multiple of 10 degrees.
Hgt	Increments of $^{12}$ m. Sum of 5 meters plus increments of $^{12}$ m if 50 is added to direction.
Per	If numerals 2 through 9 are entered, period in seconds is twice the numeric entry or $2\times$ (numeric entry) $\pm 1$ . For other entries see WMO Code 3155.
Sea	Sea state according to WMO Code 3700.

Weather code ------ If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather

according to WMO Code 4677.

### Cloud code:

Type ----- Cloud type according to WMO Code 0500.

Amount ----- Cloud amount in eighths. Entry of the numeral 9 indicates cloud amount could not be estimated.

#### Water:

Color code ----- Color according to Forel-Ule scale.

Trans. ----- Transparency in whole meters as determined by Secchi disc.

#### Wind:

Dir. ---- Rounded to nearest multiple of 10 degrees.

Speed or force ----- If preceded by letter S, wind speed in knots; if preceded by letter F, wind force according to Beaufort scale.

Barometer ----- Barometric pressure given in tens, units and tenths of millibars.

Air temp. C ----- Air temperature to tenths of a degree Celsius.

Vis. code ----- Visibility according to WMO Code 4300.

No obs. depths ----- Number of observed levels associated with the station.

Messenger time ------ Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, indicates the starting time of lowering the sensor.

Card type ------ OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.

Depth (m) ------ Depth to nearest meter, A postscript T indicates depth was obtained thermometrically;

Z indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.

T °C ----- Temperature to hundredths of a degree Celsius.

S ‰ ----- Salinity in parts per thousand.

Sigma-T ----- Entered to hundredths.

Specific-volume ----- Multiply entry by 10-7 to obtain specific-volume anomaly in cubic centimeters per gram.

ΣΔD Dyn. M · 10<sup>3</sup> ------ Multiply entry by 10<sup>-3</sup> to obtain anomaly of dynamic depth in dynamic meters referenced to the sea surface.

Sound velocity ----- Sound velocity according to Wilson's formula entered to tenths of a meter per second.

Table 1.—Observed and interpolated occanographic data for stations taken by USCGC CASTLE ROCK at Ocean Station ECHO, 28 November-11 December 1967, prepared from NODC listing No. 31-1181

ENCE	SHIP				C.E.	E F	MAR		STATION					INATO		DE	PTH	MAX. DEPTH	1		AVE		WEA-	CLOUD			NODC
ID.	CODE	LATITU	DE 1/10		GITUDE '1 1	DRIFT	10*	ARE 1"	MO DAY			EAR	NO.	STAT	TON		TOM	OF S'MPL'S	"		VATION		THER	CODE!			TATION UMBER
1181	CK	3513	-	048	320 W		113	-	11 28	13		967				42	-	14	16	_	ST PEN	31 A		8 3	+		0001
1101		1 3313		0.46	220 4		1117	WA.		WIN		,01		EMP	90			14	1_10	عا د	121			0 13	1	'	,000
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								CODE	(w) D	IR, {	0#Cf	(mbs)		Bi	JLB .	DE DE	PTHS	OBSERV	AHON	,							
									2	0 5	16	193	217	1	94 8	1	4			7							
	MESSEN	CAST							<del></del>	_				1	<b>S</b> A	-				1						1	
	1176	° NO.	CAF		DEPTH	(m)	1	*C	s •/4	. !	SIGMA	- T	ANOMALY-		∑ ∆ DYN. 1 10	M	VELO		0.5 m	171	PO4-P		TA L=P	NO2-N	NO3=N pg - ol/l		рН
	HR 1/1	0		-			+		+	$\rightarrow$					1 10	-		-		-		-					-
			٠.	TD	000	0	١,	209	3637		2529	.	00273	20	000	0	152	0.2									
	13	6	OB:		000			209	3636		2525		00275	0 6	000	_	152										
	10	o .		TD	301			210	3636		2524		00274	25	002		152										
				TD	002			211	3636		2524		00274		005		152										
	13	6	OB:		002			211	3635		2524				000		152										
	10			TD	003			210	3636		2524		00275	0.2	008		152										
	13	6	0B:		004			20 R	3635		2524		-0217				153										
	• •	_		TD.	005			208	3636		2524		00275	43	013		153										
	13	6	OB:		007			209	3636		2524						153										
			5	TD	007	15	2	199	3641		253		00270	35	020		153										
	13	6	OB:	S	009	15	2	120	3661	2	2568	3					152	88									
			5	T D	010	0	2	880	3661		257	7	00227	23	026	8	152	80									
				TD	012	5		958	3659		2610	)	00196	42	032	1	152	49									
	13	6	OB:		012			942	3658		2614						152										
				TO	015			907	3656		2621		00186	83	036		152										
	13	6	OB:		T018			852	3652		2632						152										
				TD	020			847	3652		2634		00176		045		152										
				10	025			820	3652		2640		00172		054		152	_									
	13	4	083	מז	030 T035		_	783 727	3648 3639		2646 2654		00167	84	063		152										
	15	•		5 TD	040				3630				00140	30	0.70		152										
	13	6	083		040			681 608	3616		2651 2664		00160	24	079		152 151										
	13	0		TD	050			530	3602		267		00149	72	095		151										
	13	6	OB:		054			449	3588		2678		00147	, ,	0 7 7		151										
		_		To	060		_	307	3566		2691		00131	79	109												
			S.	TD	070		1	085	3536		2710		001134		121		150										
	13	6	083	5	072	9	1	028	3529	3	2719	5					150	37									
			S'	TD	080	U	0	912	3524		2731	l	00093	90	131	8	150	06									
			S		090			768	3517		2748	3	000774	41	140	3	149	67									
	13	6	OB:		092			742	3516		2751						149										
				TD	100			646	3510		2759		00065		147		149										
			5		110			550	3504		276		00057	50	153		149										
	13	6	083		117			498	3501		2771						149										
			5		120			480	3501		2773		00051		159		149										
			5		130			437	3500		2 <b>77</b> 7		00047		164		148										
	1.2		51		140			420	3499		2778		00046	לט	168		149										
	13	0	OB:	5	T142		0	420	3498	8	2778	3					149	13									

TRY ID. CODE LATITU	1/ 10 LOP	IGITUDE IS	MARSDEN SQUARE	STATION THE	YEAR	CRUISE STAT	ION	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	OBSE	WAVE RVATIONS	WEA- THER CODE	CLOUD CODES			NODC STATION NUMBER
311181 CK 3401	ON 04	9120W	113 49	11 29 1	75 1967	E07 002		4938	10	22	2 2		7 6		ļ	0002
31/11/01/ CM   31/01			WA		IND BAP	O- AIR TEMP.	VI5	NO.	SPE	CIAL	, ,				,	
			COLOR	TRANS DIR.	SPEED MET		EF COD	DEPTHS	OBSERV	ATIONS						
				10	527 11	2 200 1	83 6	12					,			
MESSENGA CAST TIME OF NO. HR 1/10	CARD TYPF	DEPTH Imi	т 'С	s */	SIGMA-T	SPECIFIC VOLUME ANOMALY-X107	₹ △ 0 DYN. A x 10 <sup>3</sup>	A. VELC	JND	O 2 ml/l	PO4~P pg = a*/1	1014L-P ug • at/l	NO2-N µg - at/	NO3-N yg - at/l	\$104-5 vg - at/	
	STD	0000	2178	3625	2525	0027303	   0000	15	283					}	l	
175	OBS	2000	2178	36251	2525	0021303			283							
1.7	STD	0010	2177	3626	2526	0027271	0027	153	285							
	STD	0020	2175	3626	2527	0027206	0055	15	286							
175	OBS	0022	2174	36265	2527			157	286							
	STD	0030	2170	3625	2527	0027212	0082	15	286							
175	OBS	0045	2162	36243	2529			15	286							
	STD	0050	2159	3625	2530	0027015	0136	15	286							
175	08.5	0068	2150	36270	2534				287							
	STD	0075	2108	3633	2550	0025172	0201		278							
175	085	0089	2027	36413	2578				260							
	STD	0100	1954	3640	2597	0020825	0259		242							
	SID	0125	1827	3639	2629	0017881	0307		210							
175	OBS	0134	1796	36389	2636				202							
	SID	0150	1779	3640	2641	0016754	0350		200							
175	OBS	T0179	1749	36402	2649				196							
	STD	0200	1733	3638	2651	0015991	0432		195							
	SID	0250	1688	3631	2657	0015626	0511		189							
	STD	0300	1635	3622	2662	0015235	0588		180							
175	08.5	10348	1576	36122	2668	001/020	072		168							
	STD	0400	1504	3599	2674	0014323	0736		153							
175	OBS	0430	1458	35914 3575	2679 2691	0012901	0872		142 113							
1.76	STD	0500	1339			(10) [ / 90]	1157		106							
175	085	0514	1313	35714	2694	0011041	0992		045							
1.76	STD	0600 06 <b>7</b> 9	1105 0940	3542 35216	2711 2724	0011041	049		996							
175	085	0679	0900	35216	2724	0009256	1094		985							
	STD		0737	3515	2750	0007257	1176		939							
	STD	0800	0615	3509	2763	0006028	1240		906							
	STD	1000	0533	3504	2769	0005433	1300		889							
	210	1000	U 2 2 3 3	3304	2107	~~~~ <u>~~</u>	1500	√ <u>1</u> 4	007							

REFE	RENCE	SHIP					= =	ALARSDE	4	STATION TI			ORIG!	NATOR		DEPTH	MAX.	1		AVE		VEA-	CLOUD			NODE
CODE	10. NO.	COOL	LATITU		LONG	TUDE	NO N	SQUARE	_	(GMT)		EAR	CRUISE	STATIC		BOTTOM	OF			ATIONS		H ER O D E	CODES			TATION UMBER
-		-		1/10		1/10	-		_	MO DAY H			NO.	NUA'B			13 4116	_	$\rightarrow$	IT PER S	EA.		TYPE AM	1		
31	1181	CK	3404	ON	048	120W		113 4	-	12 01 1		967	E07 00			4663	17	20	_ 3	3			8 13		1	0003
									W-AT		IND	BARC	J• —	EMP. C	- VIS	NO.	SPE	CIAL								
									LOR	TRANS. DIR.	SPEED	METE		W.E	COD	DEPTHS	OBSERV		S							
								-	-	20	FORCE	_	_	+	_	1,			+							
										20	512	152	144	16		14			1			-				
		MESSENGR TIME	CAST	CAR		DEPTH (	m)	T °C		s • ; .	SIGMA	1 -T	SPECIFIC VOL		E A D	SOL	JND	0 2 ml		PO 4 - P	TOTA		NO2-N	NO3-N		рн
		HR 1:10	I NO.	TτP	*								ANDMALT-		r 103	VELS	CITY			ug + 01'l	νĝ.	a+/I	νg - α1, ι	µg = 01	νg = α1/1	
																			1							
		1		ST	ro '	0000	5	217	4	3637	253	5 '	002635	8	0000	152	283		-						1	'
		129	)	085	5	0000	J	217	4	36367	253	5				152	283									
				5 T	٥٦	0010	)	217	5	3637	253	4	002643	3 3	026	152	285									
				51		0020	)	217	6	3636	253	4	002651	6	053	152	287									
		129	)	OBS	5	0027	7	217	7	36363	253	4				152	289									
				ST		0030		217		3636	253	4	002658	3)	079	152	289									
				ST		0050		217	6	3636	253	4	002662	8.	1133	152	292									
		129	)	083		0053		217		36364	253					152										
				51		0075		217		3636	253		002668	34	199											
		129	)	083		0085		217		36364	253					152										
				ST		0100		207		3648	257		002319	95	1262											
		129	3	OBS		0107		202		36523	258					152										
				SI		0125		196		3652	260		002022		316											
				51		0150		188		3652	262		001845	7	364											
		129	,	OBS		0161		186		36517	2630					152										
		1.00		51		0200		182		3650	263		001717	8	1453											
		129	,	085		0217		180		36489	264		00140				219									
				S T S T		0250		179		3648	264		001692		539											
				5 T		0400		177 167	-	3645 3629	264		001674		1623											
		129	1	089		0400 10435		162		3629	265i 266i		001600	19	786											
		129		51		0500		152		3600	267		001492		941	152 151										
		129	1	085		0544		142		35848	268		001492	1	1441											
		127		ST		0600		127		3562	269		001279	1	1080	151 151										
		129		085		10652		113		35444	270		00127	. 1		150										
		16,		5.1		0700		101		3533	272		001028	16	195	150										
				5 T		0800		080		3516	274		000817		1287											
		129	,	OBS		0871		069		35081	275			,	201	149										
				51		0900		067		3508	275		000694	Ω.	1363											
				5 T		1000		060		3508	276		000615		1428											
		129	•	085		1086		055		35077	276		-9001		0	149										
				ST		1100		055		3507	276		000555	4	1487											
				ST		1200		050		3504	277		000521		541	149										
				ST		1300		046	_	3501	277		000500		592	_	-									
		129	,	085		1367		044		34998	277				_	_	912									
				ST	D	1400		043	2	3499	277		000485	2	1641											
					-					0.00																
				5.1	D	1500	J	041	1	3498	277	9	000474	0	1689	149	922									

ID.	SHIP CODE	LATITUDE		NGITUDE	200	MARS SQU			TION T		YEAR	CRUIS NO.		TATION		DEPTH TO BOTTON	DEPTH OF S'MPL	0.6		VE ATIONS	cor	R COD	S		NODC STATION NUMBER	
101	C .	351808	_	8080W						179	1967	100.	7 004		-	2025		1			_				000/	1
181	CK	301000	1 0 4	*0000W	1	.13	58 WA			NIND		1	AIR TEA		- 1	2835	15	33	4	2	18	8 4			0004	I
						Ì	COLOR	T	+	SPEES OR FORC	14.0	ER	DRY BULB	W ET BULB	VIS. CODE	NO. OBS. DEPTHS	CATTER	CIAL /ATIONS								
									32	522	98	3 ]	83	161	7	13			1							
	MESSENG TIME HR 1/10	ยู้ พอ.	TYPE	DEPTH (	m )	Ţ	°C	5	٠,	SIG	MA-T		IC VOLU	DY	Δ D N. M 10 <sup>3</sup>		UND OCITY	O <sub>2</sub> ml/		PO4=P y = at/l	TOTA L-					
		1		1						1						1			$\top$			1				_
1		' '	STD	0000	) '	2	117	36	42	2.5	54	002	24494	4 OC	00	15	269		-			1	1	'	'	
	17	9 0	RS	0000	)	2:	117	36	417	25	54					15	269									
			STD	0010	)	2	118	36	42	25	54	002	4573	3 00	25	15	271									
			STD	002		-	119	36	41		54	002	464	7 00	49		273									
	17	9 (	RS	0056			120		412		53						275									
			SID	0030			120	36			53		472		74		275									
			STD	0050			120	36			53	002	4850	9 01	23		278									
	17	4 C	85	005			118		402		53	00.	1. (1.		0.0		279									
	17		STD. BS	0075			109 104	36	41 418		56 58	002	4614	4 ()]	85		279									
	1 /	7	STD	010			21	36	-		88	003	2164	7 02	43		280 261									
	17	9 0	B.5	0119			949		587		12	002	. 104	. 02	7,		245									
			STD	0129			929	36			17	001	8992	2 02	94		241									
			STD	0150			881	36			27		811		40		231									
	17	9 0	AS	0172	,	18	342	36	522	26	35					15	223									
			SID	0200	)		323	36	49	26	37	001	7323	3 04	29		222									
			STD	025	)	1	784	36	44	26	43	001	6926	5 05	14	15	219									
			STD	0300	)		738	36	77	26	49	001	651	7 05	9.8	15	212									
			SID	0400			525	36.			63	001	5474	4 07	58		193									
	17	9 0	BS	T0462			541		070		72						176									
			STD	0500		_	479	35			77		4373		0.7		161									
			SID	0600			307	35			92	001	3034	4 10	44		118									
	17	4 ()	BS	1069			138		452		0.8	00.7	10//				072									
			SID	0700		-	113 866	35. 35			10		1349 1891		66		065 988									
			SID	0900			580	35	_		35 50		7352		68	_	931									
	17	9 0	BS	093			534		005		53	000	11300	2 13	4 4	-	918									
	1 /	_	STD	1000			581	35			60	000	6359	9 14	17		908									
			STD	1100			517	35			68		5600		77	_	899									
	17	9 0	BS	T1180			477	-	9 <b>9</b> 2		72	000	, , , , ,			_	896									
	- '		SID	1200			469	34			72	000	5140	) 15	31		896									
			STD	1300			436	34			76		4806		81		899									
			STD	1400			418	34			77		4739		28	_	908									
	1.7	9 0	BS	1488			416	_	980	-	77				_ 0		922									

		1													MAX.										7
CTRY IO.	SHIP	LATITUDE	LONGITUD	10.2	SQU	ARE		M ()	Y	EAR	CRUISE	STATE	NC	OEPTH TO BOTTOM	OÉPTH OF			ATIONS	THER COOL	CO	SEC			NCDE STATION NUMBER	
-	1	1/10		-	10*	1		Y HR			<del>   </del>	NUM			S'MPL"	1		PER SE	-	1177		_	-		-
31/1181	I CK	34440N	048080	) W	113	48 WAT	12 0		74 19	967	EO7 00	_		4462	15	25	1	2	18	8	5			0005	
						COLOR		DIR.	SPEED	METE	J•	w	VIS	NO. ORS.	SPE	CIAL 'ATION'	5								
						COOE	Lm)	J 18.	FORCE	(mba	) BULB	₿U	LB	DEPTHS											
								25	510	0.5	8 194	17	7 7	14											
	MESSENGS TIME HR 1/10	9 NO. 111		[H (m)	T	τ	s •	٠.	SIGMA	-T	SPECIFIC VOLU		≨ ∆ D 0YN. M x 10 <sup>3</sup>	SOU VELO		O2 ml		O4-P	TOTAL-# #g = 01/1	NO3-		NO3+N yg - at/l	Si O4-5 yg + a1/		
			İ		1									1				İ							
				000		084	3616		2544		002550	9	0000	152											
	174			00		084	3615		2544					152											
				10		083	3616		2544		002552		0026	152											
	174	_		20		082	3616		2544		002553	2	0051	152											
	17.			126 130		081 081	3619 3616		2549 2549		002553	0	0077	152 152											
				150		080	3616		2549		002559		0128	152											
	174			51	_	080	3615		2549		002777	2	0126	152											
	1,-	_		75	_	098	3627		2549		002533	1	0191	152											
	174			77		099	3627		2549		002)))	•	0171	152											
	• •	_		00	_	845	3634		2621		001855	9	0246	152											
	174	_		02	_	829	3635		2625					152											
				25		784	3636		263		001706	2	0291	151											
				50		740	3637		2649		001602		0332	151											
	174	OB:	5 01	54	1	734	3637	76	2650	)				151	.87										
		s ·	rb 02	00	1	672	3628	3	2658	3	001531	3	0410	151	.75										
	174					664	3626		2659					151											
			-	50	_	595	3614		2665		001476		0486	151											
				00		523	3602		2672		001421	2	0558	151											
	174					404	3583	_	2684			_		151											
				00	_	400	3583		2689		001328	9	0696	151											
	174		-	87	_	302	3569	-	2694			_		150											
	17/			00		268	3563		2696		001235	,	0824	150											
	174			00		067 031	3531		2710		001044	_	0939	150 150											
				00	_	834	3529 3516		2737		001066		1035	149											
	174	_	-	83		713	3509		2750		000050	כ	1035	149											
	1 / -			100		699	3510		2752		000707	5	1113	149											
				00		624	3509		2761		000616		1179	149											
	174	-		74		577	3508		2767			_	11.,	149											
				00		563	3508		2768		000552	1	1237												
				00		514	3505		2772		000519	_	1291	148											
				00		474	3503		2779		000491		1341	148											
	174			25	0.	465	3502	0	2775					148											
		s'		00	0	442	3500	)	2776	,	000481	2	1390												
		5	10 14	00		418	3498	3	2777	7	000473	9	1438	149	808										
	174	OB 5	5 T14	72	0	406	3497	70	2778	3				149	15										

NCE ID.	SHIP	LATITU		LON	IGITUDE	20	RSDEN UARE	- (	ION TIP		YEAR	CKU		STA	TION		DEPTH	OF	0	BSER	VA VE		WEA- THER	COC	534			NODC
NO.		•	1, 10		1/10	10"	1*	MO E	AY HE	,1/10		N	0.	NU	MBER		DITO	W S'MP		н	GT PER	SEA.	CODE	TYPE	MT			NUMBER
181	CK	3437	ON	04	8120W	111	3 48	12 0	7 1	34	196	7 E0	7 00	0.6		17	1664	16	26	1	3		16	8	в			0006
							WA	TER	w	ND		RO-	AIR T	EMP.	τ		NO.	1	-	٦' ٦			,				,	
							COLOR		DIR.	SPEED	M	ETER	DPY		NET (	CODE	OBS. DEPTH	OBSES	PECIAL RVATION	s								
							CODE	(m)	D-1111	FORCE	(n	nba)	<b>8</b> ∪L8	8	ULB		DEPIH	,		_								
									25	513	- 8	85	194	1	70	7	14											
	MESSENGR	CAST	CA	0.0								1960	IFIC VO	DAGE	¥ /	2 D	50	DUND		1	PO4-		01AL-P	NO2-		NO <sub>3</sub> -N	\$104-	
	TIME	T NO.	TY		DEPTH (m	11	ı "C	5	٠/	SIG	M A -T		OMALY-		DYN	i, M. 10 <sup>3</sup>		LOCITY	O <sub>2</sub> ml	71	NG - 01		U 1 × 01/1			μg - αI/I	ug = a).	
-	HR 1,10	-									_				+	-				-		+			+	_		+
				<b>.</b> .	0000							1	25.5			0.0	١.,									1		ł
	124			TD	0000	-	080	361		25		0.0	255	29	0.0	00		256										
	134	•	08		0000		2080 20 <b>79</b>	361 361		25		0.0	2554	. 0	00	٦,		256										
				TD TD	0010		2079	361		25			255		00.			258										
	134		08		0020		2078	361		25		00	2300	כנ	UU	7.1		260										
	1 )4	,		TD	0030		2078	361		25		0.0	255	79	00	77		261										
				TD	0050		2077	361		25			2560		01			264										
	134		ΩB		0053		2077	361		25			250,	~	01	20		264										
				TD	0075		2077	361		25		0.0	2568	9.8	01	92		268										
	134	,	OB		0080		2077	361		25								269										
				ΤD	0100	2	2051	362		25		0.0	2436	56	0.2	55		266										
	134		08	5	0105	2	2041	362	77	25	64						15	265										
			S	TD	0125		1943	363	37	25	97	0.0	208	59	∩ 3	11	15	242										
			<	Tη	0150		1851	364	5	26.	27	0.0	181	12	73	60	15	221										
	134	•	OB	S	0158		1829	364	64	26	34							217										
				TD	0200		1786	364		26		0.0	1664	4 3	04	47		211										
	134	+	OB		T0213		772	364		26								209										
			-	TD	0250		1739	364		26			161		05	_	_	205										
				TD	0300		1688	363		26			157		0.6			197										
			_	TD	0400		1560	360		26		90	148	20	0.7	62		172										
	134	•	OB		T0421		1529	360		26		0.0				0.0	-	165										
	10.			TD	0500		1400	358		26	_	O C	1350	) ]	0.9	Ų <b>3</b>		134										
	134	•	08		0525		1353	357		26		0.0			- ^			122										
	124			TD	0600		1185	355 354		27		ut	1180	) /	10	30		074										
	134	,	08	s TD	T0626 0700		1128	352		271		0.0	095			2.		058										
				To	0800		745	350		27			0780		11			941										
	134		OB	_	0834		693	350		27		00	0760	J 44	12	2 5		926										
	1 )4		-	Ťρ	0900		636	350		27		0.0	066	2 0	12	0.5	_	914										
			_	TD	1000		565	350		27			057	_	13		_	902										
	134		OB		T1044		540	350		27			03,		1 )	, ,	-	900										
				ΤĐ	1100		523	350		27		0.0	052	78	14	12	-	902										
				TO	1200		1494	350		27			050		14			907										
				TD	1300		1466	350		27			048	-	15			912										
	134	,	ÓВ		1321		461	350	40	27					-			913										
				TD	1400		)441	350	3	27		0.0	046	79	15	61		918										
			S	TD	1500	(	418	350	0	27	79	0.0	0468	3 7	16	07	14	925										
	134		08	S	11597		397	349	773	27	79						14	932										

REFERENCE	1				_ = M	ARSOEN	STATION TI	A* E		ORIGINA	TO R'S	1	OEPTH	MAX.		WAVE	w E	A- CLOU	0		NODE
TRY IO.	CODE	LATITU	1/10	LONGITUDE	INDCT	QUARE	IGMT)	Y	EAR	CRUISE S1	ATION JAMBER	$\neg$	10	OF OF S'MPL'S	OR DIR	SERVATION	S TH	ER CODE	S	S	TATION LUMBER
31118	1 CK	3500		48090W	1	3 58		70 1	967	E07 007		-	4078	15	32	1 2	SEM.	8 3			0007
, 1,410	1 -1 -1	3,000		,	1 1			/IND	BARC	AID TEA	P. °C		NO.			]		1 0 13		1	000.
						COLOR	TRANS DIR.	SPEED OR	M ETE	R DRY		VI\$.	200	SPEC							
						0000	++	S10	193		_	,	14								
							23	310	1 4		- 3 - 1		1					1			T -
	MESSENGE TIME	CAST NO.	TYPE	OEPTH (	m I	1 10	5 *	SIGMA	-1	ANOMALY-110		. M.	VEFOC 2001		0 2 ml	PO4=P					рН
	HR 1/10	1			-			1				-		-		-	†		1	-	-
		1 1	STD	0000	)	2085	3632	2556	. 1	0024349	000	0.0	152	60				l		1	
	170	)	OBS	0000		2085	36322	2556		0024347	000	, ,	152								
	•		STD			2085	3632	2556		0024386	002	24	152								
			STD			2085	3632	2556		0024424			152								
	170	)	OBS	0025		2085	36322	2556					152								
			STD	0030		2085	3632	2556	5	0024467	001	73	152	65							
			STO	0050	)	2086	3632	255€	5	0024548	012	2 2	152								
	170	)	OBS	0051	l	2086	36324	2556	5				152	68							
			SID	0075	5	2078	3633	2558	3	0024399	018	33	152	70							
	170	)	CBS	0076		2078	36330	2558					152								
			STD			2073	3639	2564		0023922	024	44	152								
	170	)	OBS	010:		2072	36392	2569					152								
			SID			1963	3647	2599		0020664			1524								
			SID			1884	3654	2626		0018234	034	+8	152								
	170	)	085	0152		1879	36550	2628					152								
			STD			1833	3654	2639		0017173	0.43	3 7	152								
	170	)	085	T 1204		1829	36543	2640		0017400	0.5.5		152								
			SID			1825	3648	2636		0017639			152								
	170	`	STO	0300 10399		1794 1648	3640	2638		0017596	061	. 2	152								
	110	,	SID			1645	36261 3626	2662 2663		0015493	077	, ,	1520 1520								
	170	)	085	0499		1387	35769	2683		0019473	011	, ,	151								
	1/0	,	SID			1384	3577	2683		0013706	092	, ,	151								
			STD			1125	3544	2709		0011771	104		150								
	170	)	085	T0603		1118	35429	2709		0011271	104	- 0	150								
	110		STD			0912	3527	2733		0008973	114	. 9	149								
	170	)	085	0797		0745	35147	2749		. , , , , ,	11-		149								
			STD			0741	3514	2749		0007376	123	3 1	149								
			SID			0615	3506	2760		0006263			149								
	170	)	085	T0994		0529	35005	2767					148								
			STD	1000	)	0527	3501	2767	7	0005580	135	9	148	86							
			SID	1100	)	0496	3500	2770		0005288	141	13	1489	90							
			STD	1200	)	0469	3500	2773	3	0005045	146	55	1489	96							
	170	)	OBS	1248		0458	35003	2775	5				1489	99							
			SID			0447	3500	2775		0004901	151	4	149	04							
			SID			0427	3499	2777		0004822			149								
			STD			0412	3497	2777		0004805	161	1	149								
	170	)	085	T1510	)	0411	34972	2777	7				149	23							

EFERENCE	SHIP				. E MAR	SDEN	STATION	TIAAF	_	Т.	ONCIA	A7OR'S	_											
BY ID. DI NO.	CODE	LATITU		LONGITUDE		JARE	IGM	Tì	YEAR	CRUISE		TATION		H193D O1	DEPTH	0.8		A TION	,	WEA-	Cronc			NODC
			1/10	1/10	≈ 10°	1.	MO DAY	HR.1/10		NO.		NU MBER		BOTTOM	OF S'MPL"	1		T PER	,	THER	CODE			STATION
111181	1  CK	3502	ON	048560W	113	58	12 11	132	1967	E07	0.0	8		4398	18				NI A		TYPE AN	1		
						W	ATER	WIND	BA		_	MP. °C		NO.	10	26	, 1	15			3 6	1		0008
						COLO	R TRANS. OII		ME	TER (	PY	WET	CODE	085.	OBSERV	JAL								
						-		FOR			ULB	BULB		DEPTHS		- 11011								
	MESSENGE	TT	_				25	525	21	. 3   21	00	172	7	13										
	TIME		CARO	OEPIH (m	>   т	°C	s ./	SIC	M A - I	SPECIFIC	VOLU	ME S	A ₽	sou	IND		,	04-9	1,0	TAL-P	NO2-N		1	
	HR 1/10				-			_		ANOM.	ALY-XI		103	VELO	CITY	O 2 ml/i		g - at/l		- 01/1	µg - at/l	NO3→N 140 - 01/1	\$10.	
	İ			.													+		+-				+	
	122		ST			082	3635	25	59	0024	061	l 'no	0.0	152	59				i					
	132		OBS	0000		280	36351	25	59					152										
			STE			082	3635	25	59	0024	114	. 00	24	152										
			STO			083	3635		59	0024				152										
	132		510			083	3635		59	0024	207			152										
	132		OBS	0031		183	36345	25	58					152										
	132		STE			184	3635	25		0024	313	01	21	152										
	102		085	0061		84	36350							152										
	132		STD OBS			182	3635	25		0024	316	018	82	152										
	1 72		SID	0092		79	36358	25						152	74									
	132		085			125	3643	25		0022	399	024	40	152	61									
	152		SID	0123 0125		902	36570	26						152	33									
			STD			399	3657	26		0018			<del>9</del> 1	152	32									
	132		OBS	0184		61	3653	26		0017	775	0.33	36	152	25									
			STD	0200		10	36481	26						152	16									
			STD	0250		92	3644	26		0016		042	3	152	13									
			STD	0300		63	3633	264		0016		050	-	1520	0.2									
			STD	0400		04	3621 3595	26		0015		058		1518										
	132		OBS	T0491		34	35708	26		0014	614	074	0	1515										
			STD	0500		13	3568	268		0015	•			1510										
			STD	0600		93	3539	269		0012		087		1510	_									
	132	(	DBS	0616		60	35353	271		0011	041	099	7	1504	_									
			SID	0700	0.8		3524	273		0000			_	1503										
	132	(	08.5	T0739	0.8		35200	274		0008	943	109	7	1498										
			STD	0800	07		3518	275		0007			_	1496										
			SID	0900	06		3514	276		0005		117		1494	_									
	132	(	BS	0975	0.5		35114	277		0005	732	124	3	1491										
			STD	1000	05		3511	277		0005;	2 2 1	1.70	_	1490										
			STD	1100	0.5	19	3508	277		00050		129		1490										
			STD	1200	04		3505	277		00049		135 140		1490										
	132	C	BS	T1208	04	81	35045	277		-004	, , ,	140	J	1490	-									
			STD	1300	04	50	3502	277		00047	743	144	0	1490										
			STD	1400	04		3500	277		00046		149		1490	_									
			STD	1500	040	) 3	3498	277		00046		154		1491										
	132		BS	1525	039		34972	277			-	1 - 4.	-	1492										
	122		STD	1750	038		3498	278		00047	0.2	165	9	1495										
	132	0	BS	T1836	038	35	34976	278			-	107	-	1496										

Table II.—Observed and interpolated occanographic data for stations taken by USCGC HUMBOLDT at Ocean Station ECHO, 10 January-1 February 1968, prepared from NODC listing No. 31-1203

FERENCE	SHIP					- 2	MARS		STATIC					ORIGIN	ATOR'S		DE	PTH	MAX		WAV		WE	Α-	CLOUD		,	NODC
Y IO.	COOF	LATITU	- 1	LON	1/10 TE	PRIET	SQU			MT)		YEAR	CRUIS		TATION NUMBER			TOM	OF S'MPL"	0.	SERVA	TIONS PER SEA	TH CO	Dr.	CODES		51	TATION
+		2500	1/10	~	- 0.10	<del>                                     </del>	10*	1		YHR		968		+				0.3		+	HGI	3	-	_				0001
11203	HU	3500	N	041	800 W		113	5.8 WAT		1	42   1	768	E08	AIR TE			48		15	32	1 1	1 3	×	1	3 6	l	'	0001
								COLOR	TRANS.	OIR.	SPEED	METE	R	ORY	WET	- vis		as.	SPE	CIAL								
								CODE	1/11	_	FORCE	(mbs		BULB	BULB	+-	+-	11/13			-							
							,			2	510	23	7	.78	167		1	4			1,						-	
	MESSENGR TIME	CAST NO.	CA	10	DEPTH I	(m 1	т	€	ς.		SIGM	A-T	SPECIF	C VOLU	ME :	YN N	.	sou		0 2 ml/		۹-4	TOTAL.		NO2-N	NO3-N	S1 0 4 - Si	рН
	HR 1/10	NO.	TYF	't									440	w. AL ( - 1 )		x 103		VELO	CITY		20	- 01/1	μ <b>9</b> - αΙ	71	ug - 01/1	µg - ai/l	μg - α1/l	
															-		1								1			
			5		0000			364	364		262		001	825	0 0	000		152										
	142		OB:		000			364	364	_	262							152										
				TD	0010			866	3640		262			833		018		152										
				T D	0020			868	3640		261		001	843	0 0	037		152										
	142		OB:		0024			869	3641		261		001	0.0	, ,	055		152										
	142	,	083		0030		_	869 868	364		261 261		001	848	4 (	055		152 152										
	142			T D	0050		-	368	364		261		001	853	1 0	092		152										
	142	,	OB:	-	007			966	364		262		00,	. 600	1 (	0 7 2		152										
	142			TD .	007			366	364	-	262		00.1	855	5 0	139		152										
	142	,	08		009		_	365	3641		262			. 0 ) )	_	15,		152										
	142			TD	0100			958	364		262		001	832	2 0	185		152										
				ΤD	012			318	3648		263			701		229		152										
	142	!	OB S		0144			796	365		264							152										
			S1	TD	0150		1	794	3650	)	264	5	001	638	4 0	271		152	206									
	142		083	5	019	3	1	772	364	6	264	Q						152	206									
			S	I D	020	0	1	764	3646	,	265	0	001	613	7 C	352		152	205									
				T D	0250		1	703	363		265			568		431		151	194									
			_	TΟ	0300		16	536	362		266	-	001	525	7 0	509	,	151	180									
	142	!	083		T038			504	3598		267							151										
			S		0400			483	3594		267		001	423	5 0	656		151										
	142		OBS		0484			334	3569		268							151										
			51		0500			302	356		269		001	288	4 0	792		150										
	142	:	0B3		T058			126 192	354! 354!		271 271		00.1	073	1 0	910		150										
				T D	0701		_	392 868	352		273			832	_	005		150 149										
	142	,	089		0779			737	351		275		000	002	0 1	005		149										
	142	•		Īρ	080			719	351		275		000	689	6 1	081		149										
				T D	0900			637	3514		276			599		146		149	-									
	142		08		T0969			588	351		276				- 1	1.0		149										
				ĪD	1000			567	350		276		000	550	3 1	203		149										
			-	ΤD	1100		0	507	350	3	277			524		257		148										
				TD	1200		0	461	349	,	277			503		308		148										
	142	•	08	S	1234	4	0	448	349	8	277	4						146	993									
			S T	ΙD	1300			428	3491	3	277	6	000	480	4 ]	357		148										
			5	ΤD	1400	D	0	408	349	,	277	8	000	466	6 1	405	,	149	904									
	142	!	0B:	5	T149	3	0	402	349	8	277	8						149	917									

REFERENCE					MARCOE:	CTATION: TO		ORIGINATO	70°C T	A	AX.					61.01:-		-	
	SHIP	LATITU	DE L	DNGITUDE	MARSDEN SQUARE	STATION TO	YEAR	CRUISE STA		DEPTH D	EPTH OF	0858	WAVE RVATION	S TH		CLOND			NDDC TATION
ODE NO.	CDDE	•	1/10	1/10 3	10" 1"	MO DAY H	R.1/10		ABER	BOTTOM 5',	MPL'S	DIR	HGT PEP	SEA CD	DE	TYPE AM	T	7	UMBER
311203	HU	3458	N O	4758 W	113 47	01 11 1	129 1968	E08 002		4096	12	28	5 3	×	8	6 8			0002
					WA	-	IND BAR		°C VIS.	ND.	SPECIA	A.L							
					COLOR	TRANS DIR.	SPEED MET		VET COD	DEPTHS OB	SERVA								
						29	S11 21		70 8	14									
г						1 24	211   21	, 1700 1	1	1 4			т		-				
1	MESSENGR TIME HR 1/10	CAST ND.	CARD	DEPTH (m)	7 °C	s ·4.	SIG MA-T	SPECIFIC VOLUME ANOMALY-EIG?	₹ △ D N MYD x 10 <sup>1</sup>	VELOCIT		2 ml/l	PD4-P	FOTAL PR - 0		NO2-N ug - ol/l	NO3-N	SI O 4-Si NB - 01/1	рН
							-							Ì					
			STD	0000	1842	3639	2625	0017772	0000	1519									
	099	)	085	0000	1842	36394	2625			1519									
	0.00		STD	0010	1843	3640	2625	0017824	0018										
	099	,	OBS STD	0015 0020	1844 1844	36395 3640	2625 2625	0017876	0036	1519 1519									
			STD	0020	1844	3640	2625	0017904	0054										
	099	)	OBS	0047	1844	36399	2625	0011704	000	1520									
	0,7,	<b>'</b>	STD	0050	1844	3640	2625	0017965	0089										
	099	,	OBS	0071	1846	36396	2624	001.703	000)	1520									
			STD	0075	1845	3640	2625	0018094	0134										
	099	•	085	0094	1844	36394	2625			1521									
			STD	0100	1845	3640	2625	0018180	0180	1521	1								
			STD	0125	1847	3640	2624	0018294	0225	1521	6								
	099	•	OBS	0137	1848	36401	2624			1521	8								
			STD	0150	1830	3643	2631	0017751	0270										
	099	9	OBS	70180	1793	36482	2644			1521									
			STD	0200	1778	3646	2646	0016460	0356										
			STD	0250	1741	3641	2651	0016132	0437										
	0.00		STD	0300	1705	3636	2656	0015809	0517										
	099	,	085	T0336 0400	1678	36323 3607	2660	001//70	0.70	1520									
	099	,	STD	0400	1547 1523	36031	2671 2673	0014679	0670	1516 1516									
	099		085	T0487	1338	35734	2690			1511									
	0,,		STO	0500	1311	3569	2692	0012773	0807										
			STO	0600	1110	3542	2710	0011133	0927										
	099	9	OBS	0642	1031	35331	2718			1502									
			STD	0700	0923	3523	2728	0009450	1029										
	099	•	OBS	0794	0772	35107	2742			1495	1								
			STD	0800	0763	3510	2743	0008007	1117	1494	8								
			STO	0900	0635	3505	2757	0006622	1190	1491	4								
	099	7	085	0987	0555	35025	2765			1489									
			STD	1000	0545	3503	2766	0005677	1251										
			STO	1100	0493	3503	2772	0005093	1305										
	099	9	abs	T1178	0478	35025	2774			1489	6								

								T					_	08/5/8		110			MAX								 
			LATITU	DE	LON	GITUDE 15 9	SOL	JARE	STATIO (G	N TIN MT}	1,5	YEAR	CRUI						DEPTH						CCCE	5	TATION
	CODE NO.	CODE				1/10 5	10*		MO DA	Y HR									S'MPL'S	S Diff	t H	GT PER S	ŧ A		TIPE A	· T	
	211202	LUL I	2502		04.6	100 W				-		949	FO	9 00	12			4316	1.5	2	4 6	3		Y 6	5 8	1	 0003
	1 311203	100	3,00	214	040	, o o w	1117					T	1			rT				,	7	1-1	-	7.0	. 5 . 6		0005
										-						-		085.									
									(m)									DEPTHS	063644	~ 1100	,,						
									7	_		11	2	172	1	71	7	14									
SID   0000								1	h			1			٠.,	_		-	-								 Ţ
STO   OCC   1838   3635   2623   OCC   1839   3636   2623   OCC   1839   3637   2625   OCC   OCC   1839   3637   2625   OCC	MESSENGR TIME of	CAST			DEPTH (m)	1	*C	2 .	٠. ا	SIGM	A - T	SPECI	FIC VOL	UME 110?	DYN	, M			02 7	171						pН	
195					,								_			×	101		-				1			DV - 01	 -
195					Ì													1	1				-			1	
STD   0010				51	To	0000	1	838	3635	5	262	3	00	1798	8.8	0.0	00	15	192								
STD   0020   1839   3636   2623   0018058   0036   15198		195		OBS	S				3635	1																	
195																											
195							_																				
195					-		_						00	1809	13	00	54										
STD   0050   1835   3637   2625   0017955   0090   15200							_																				
195		195											0.0	1 705	-	0.0											
STD   0075   1835   3638   2626   0017948   0135   15204     195													00	1795	) 5	00	90										
195		195											0.0	170/		0.1	2 -										
STD		105											00	1194		01	20										
STD   0125   1834   3638   2626   0018167   0225   15212   15215   1		195											00	1004		0.1	٥ ٥										
195				_	-																						
STD   0150   1820   3636   2628   0018018   0271   15212     STD   0200   1633   3621   2662   0014910   0353   15163     195   085   70200   1633   36214   2662   15163     STD   0250   1570   3611   2669   0014427   0426   15150     STD   0300   1500   3601   2677   001379   0497   15135     195   085   70396   1344   35767   2691   15098     STD   0400   1337   3575   2692   0012586   0629   15096     195   085   0490   1164   35498   2706   15049     STD   0500   1141   3547   2708   0011101   0747   15042     195   085   70584   0962   35256   2724   14989     STD   0600   0930   3523   2727   0009365   0849   14980     STD   0700   0759   3511   2744   0007703   0935   14930     195   085   0787   0647   35041   2754   14900     STD   0800   0636   3504   2756   0006566   1006   14898     STD   0900   0564   3503   2764   0005774   1068   14886     STD   1000   0514   3502   2770   0005303   1123   14881     STD   1000   0514   3502   2775   0005303   1123   14881     STD   1000   0491   3502   2775   0005303   1123   14889     STD   1000   0496   3501   2775   0004796   1226   14896     195   085   1249   0457   35010   2775   14899     STD   1300   0446   3501   2777   0004792   1275   14903     STD   1400   0424   3499   2777   0004765   1322   14911     STD   1500   0403   3498   2779   0004634   1369   14919		105											00	1016	)	UZ.	۷.,										
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TINIPPERS	SHIP LATE	TUDE   LO	NGHUDE 35 A	MAPSCEN SOUAFE	STATION TO	YEAR	CRUIS€	STATION NUMBER		DEPTH TO BOTTOM	DEPTH OF S'MPL'	085	WAVE ERVATIONS HGT PER SE	WEA- THER CODE	CLOUD CODES			NOOC STATION NUMBER
311203	HU 350	75N 04	8155W	113 58	01   13   0	99 1968	E08 00	4		4426	12	01	2 2	X 8	5 6			0004
				.5 A.	ER W	IND SAI	(U-	MP C	vis	NO.	SPE	CIAL						
				COLOR	TRANS DIR.	OR (mt		W E T BULB	CODE	DEPTHS		ATIONS						
					30	507 16		12	8	14								
r		- T	,		130	307 116	112	-		14								
	THE OT NO	T CARD TIPE	DEPTH (m)	† *C	s */	SIGM A-T	SPECIFIC VOLI	107	∑ ∆ D DYN. M x 10 <sup>3</sup>		DCITY	02 ml/l	PO 4 = P ug = 01/1	101AL#F #g = 01/1	NO2-N up - 01/1	403-N	\$1 O₄−5 µg - α1/	
		SID	0000	1851	3644	2626	001766	8 0	000	15	197							
	099	OBS	0000	1851	36438	2626					197							
		SID	0010	1852	3644	2626	001771		018	-	199							
		SID	0020	1852	3644	2626	001776	1 0	035		200							
	004	OBS	0022	1852	36438	2626					201							
		SID	0030	1853	3644	2626	001781	.6 0	1053	15								
	000	OBS	0043	1854	36440	2626		_			205							
	0.00	SID	0050	1854	3644	2626	001790	3 0	089									
	099	085	0065	1853	36440	2626	001704				208							
	U <b>9</b> 9	STD	0075	1853	3644	2626	001796	1 0	134	15								
	044	OBS STD	0086	1853 1853	36442 3644	2626	001804	2 0			211							
		SID	010U 0125	1853	3644	2626 2626	001804		)179 )224		214 218							
	099	OBS	0129	1853	36442	2626	00181		1224		219							
		SID	0150	1834	3648	2634	001748	15 0	1269									
	099	ORS	T0177	1810	36502	2641	001.10				215							
		SID	0200	1801	3650	2644	001672	4 0	1354		216							
		STO	0250	1768	3646	2649	001640		437		214							
		STD	0300	1718	3637	2654	001605	0 0	518		207							
	099	OBS	T0341	1663	36278	2660				15	196							
		SID	0400	1561	3608	2668	001491	4 0	673	15.								
	099	OBS	0417	1530	36029	2672					164							
	099	OBS	T0493	1387	35794	2685					128							
		STD	0500	1378	3578	2685	001348		815		126							
	003	SID	0600	1222	3556	2700	001222	7 C	943		880							
	097	OBS	0647	1131	35451	2709	00100		055		063							
	099	STD	0700	0987 0794	3530	2723	001003	2 1	055		018							
	044	ORS SID	T0788 0800	0778	35117 3511	2739 2741	000015		167		958							
		STD	0900	0657	3507	2756	000815	_	L <b>14</b> 6 L220		954 923							
		STD	1000	0563	3504	2765	000575		1220		901							
	099	085	1005	0559	35033	2765	3000 100	- 1	1203	_	901							
		SID	1100	0494	3501	2771	000521	7 1	339		990							
		STD	1200	0452	3499	2774	000491		389		989							
	097	OBS	T1230	0444	34982	2775		1		-	390							

ERENCE			LONGITUDE	MAR	SOEN	STATION TO	ME	×		RIGINA	A TO R'S		DEPTH	MAX		W	AVE		WEA-	CLOU			NODC
10. CODE	LATITU	1/10	LONGITUDE 1/10	2 10.	JARE 1	MO DAY H	R.1/10	YEAR	CRUISE NO.		TATION UMBER		TO MOTTOM	0.5			GT PER		CODE	TYPE A			STATION YUN BEI
11203 HU	3503	N.	04825 W		58			1968	E08	006	5		4444	15	_				×1	8 2			000
	,				WA		ONIV	BARC	1 41		AP. °C	Τ,	NO.	· -		٦,'-	1-1						
					COLOR	TRANS OIR.	SPEED	METE	R OF		WET	V15.	200	OBSER1	CIAL VATION	15							
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TIME	GR CAST	CARD		1	₩.	5 *4.	SIGN	AA-T	SPECIFIC	VOLU:	,	∆ 0 YN. M x 10 <sup>3</sup>	. AETO	DOITY	03 4	sizt.	PO 4-1		OTAL-P	NO2=N ug - of/	NO3-N		
HR 1/	10	-		-		+			-	_	-	X 10-	+			-		+-				+	-
1	Į.	STO	0000	1	841	3647	263	2.1	0017	104	.	000	16	194		1					i		
1.1	30	085	0000		841	36470	263		0017	1 > 0	, 0	000		194									
•	, -	STI			842	3647	263		0017	260	0	017		196									
		ST			843	3647	263		0017			035		198									
13	30	OBS	0026		844	36467	263							199									
		ST	0030	1	844	3647	263	30	0017	396	0	052	157	200									
10	30	085	0042		844	36468	263							202									
		ST			844	3647	263		0017			087		203									
		ST			844	3647	263		0017	570	0 0	131		207									
1:	30	OBS	0078	_	844	36465	263							208									
		STI		_	844	3646	263		0017	68	/ 0	175		211									
1.	30	OBS ST	0106 0125	_	844 844	36460 3646	263 263		0017	7.0		219		212 216									
		511			844	3646	263		0017			263		220									
1:	30	OBS	0160		844	36465	263		0017	04,		200		221									
•	, ,	STI			795	3648	264		0016	726	5 0	350		214									
1:	30	OBS	T0213	_	780	36485	264							212									
		ST		1	774	3648	264	19	0016	399	9 0	433		216									
		STO	0300	1	751	3644	265	5 1	0016	316	0	514	15	217									
		ST(	0400	1	647	3625	266	52	0015	611	1 0	674	153	200									
13	30	OBS	0418		620	36205	266						15	194									
	_	ST		_	461	3592	267		0014	20€	0	823		155									
13	30	OBS	0519		425	35858	268		0015					146									
1 -	20	STI			280	3567	269		0012	566	0	957		109									
1.	30	OBS ST	0616 0700		248 010	35626 3532	270		0010	200		071		100 027									
		ST			791	3508	273		0010			166		958									
1 1	30	085	0808		776	35071	273		3008	770	, 1	100		954									
•		STI			657	3505	275		0006	940	) 1	243		923									
13	30	OBS	10990		566	35035	276				•			901									
		ST	1000	0	560	3503	276		0005	847	7 1	307		900									
		STO	1100	0	510	3502	277	70	0005	358	3 1	363	14	896									
		ST			470	3501	277		0005	007	7 1	415		896									
1 3	30	OBS	1262		450	34998	277							898									
		ST			440	3499	277		0004		-	464		901									
		ST			419	3499	277		0004		_	512		909									
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SNIP	LATITU	- 1	LON	igituot	DRUFT	MAR SQU	ARE	-	ION TI GMTI		YEAR	CKUI		STA	TION	[ T	PTH O TOM	MAX. DEPTH OF	1 0		NTIONS		R C	ODES			NODC
). CODE	· .	1/10		1/10	-	10*	1,	MO (	AY H	R.1/10		NO	).	NUA	MBER	BOT	IOM	S'MPL"	S DIA.	HGT	PER S	EA COI	30	E AMI			NUMBER
3 HU	3501	N	04	758 W		113	57	01	5 1	32	196	B EO	8 00	06		42	43	16	33	3	3	l x	8	7			0006
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							COLOR		DIR.	SPEED	ME	TER	DRY		VET CO	0	BS. THS		CIAL /ATIONS								
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MESSENG	CAST	CAI	10			Ι.		Τ,	.,	I		SPEC	FIC VOL	UME	₹ ∆ ¢		SOI	סאנ		٦,	04-P	TOTAL-		2-N		110	
HR 1/1	P NO.	TY	YE	DEPTH I	ım ı	'	€	,	٠/	SIG	1- AN		MALY-		X 103	<u> </u>		YIIOC	03 ml/		- 01/1	29 - 01.		01/1	NO3-N	\$1 O4=5	
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ı	1	١ .	rp	0000	٦.	1	807	362	. 7	24	2.5	1	1701	~	1 0000	, I.							1	- 1		l	I
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13	2		TD.	0010			807	367		26		00	1788	27.	0018			182 184									
			ΓĎ	0020			808	362		26			1792		0016			186									
13	2	08		0026			808	362		26					0000			187									
			Īρ	0030			809	362		26		00	1798	32	0054			188									
		s.	rp	0050	)		812	362		26			1812	_	0090			192									
13	2	083	5	0051	l	1	812	362	71	26	23							192									
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13	2	083		0101		_	805	362		26							151	198									
			rp	0125			749	361		26			1659		0223			186									
1.2	2	S.		0150			698	363		26		00	1537	1	0263			176									
13	2	083 S1		0152			694	363		26		00						175									
13	2	0B		T0204			617 611	361 361		260		00	1472	. /	0338			158									
1)	۷	51		0250			549	360		26		00	1418		0411			156									
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13	2	083		T0412			320	357		26		00	1200	, ,	0012			92									
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13	2	083	5	0510			173	355		270					()   )			255									
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		51	_	0800			725	351		275		0.0	0713	4	1009			934									
13	2	083		0817			705	351		275	_					1	149	929									
		51	_	0900			8 0 6	350		276			0601		1074			903									
2.0	_	\$1		1000			520	350		271		00	0530	2	1131	-		384									
13	2	085		T1012			511	350		27	_	0.0		_				82									
		51 51		1100			484 457	350	_	27			0501		1183			386									
13	2	OBS		1281			457 438	350 349	_	27		001	0483	5	1232		148										
13.	<b>c</b>	51		1300			434	349		27	-	00	0478	0	1280		148 148	397									
		51		1400			414	349		27			04 / 6 04 6 8		1327		148 149										
		51		1500			397	349		27			3462		1374		149										
13	2	085		T1556			389	349		278			- 702	0	1 3 / 4	_		22									

CE	SHIP					- 5					TIME			ORIGIN	ATOR'S		DEPTH	MAX.		WAV	٤	W	FA: C	CLDUD			NODC
D.	CODE	LATITL	- 1	LOP	MGITUDE	900	sou.	ARE		GMI	,	TEAR	CRUIS		TATION		TD	DEPTH	08	SERVA	TIONS	TH	ER	CODE		5	TATION
0.			1/10		1/10	- 1	10*	1.	MO [	YAC	HR,1/10		NO.	1	UMBER		BOTTOM	S'MPL'S	O ill.	HGT	11 51	A CC	DE 7,	FF AM	1	N	UWBER
03	HU	3500	N	04	808 W		113	58	01 1	15	183	1968	E0 8	00	7		4206	39	33	3		х	2	1 2			0007
							ſ	WA	TER		WIND	BAR	<u>, T</u>	AIR TEA	AF. °C	T	NO.			] .	' '	1	- '	1	1	- 1	3001
								COLOR	TRANS.	DIR	SPEET	META		DRY	WET	COD	085.	OBSERV									
								CODE	(m)	DIR	FORC	f (mb	a I	BULE	BULB	1	DEPTHS	OBSERV.	י ווטאי								
							[			30	503	36	2 1	78	168	8	14										
- [	MESSENGE	CAST	CAF	10			Τ.				1		SPECIE	C AOTA	8	Δρ	sou			T			Τ.				
- 1	TIME HR 1/10	NO.	TYP	PE .	DEPTH	(m)	1 '	6	,	•	SIG	MA-T		AALY-XI	,7 D	rN, <i>N</i> ( 10 <sup>3</sup>	No. of the contract of		02 ml/		4-P - at/t	101AL		0 g = N   - a1/	ND3=N ug = at/1	\$1 Da⊷\$+ 20 • 01/1	
[																				+-				_			
,	183	3 '	089	5	T187	8	03	376	349	64	27	80			ı		149	167			I		ı		1		ţ
			S.1	r p	200	0		364	349		27	-	000	4604			149	-									
	183	3	083		236		_	330	349				000	+00-	•		150										
			51	ďρ	250	0		916	349		27		000	4364	4		150										
	183	9	089	5	T285	5		84	349	39	_						150										
			\$1	ΓD	300	0	0.2	71	349	3	27		000	4224			151										
	183	3	083	5	384	3		226	348		27						152										
	183	3	083	5	T394	2		224	348	03							152										

REFERENCE	SHIP	LATITU	Dξ	LONGITUDE	DCTe	MAR SOL	SDEN	STATIO	ON TIM	E	YEAR	CRUIS	_	ATOP'S		DEPTH	MAX. DEFTH	60	WAY	VE TIONS	WEA			1.	NDDC TATION
TRY 10,	CODE	•	1/10	1/10		10*	1.	MO D	AY HR.	1/10		NO.		OITAT?		BOTTOM	S'MPL'S	t		PER SE	000				UMBER
311203	HU	3500	N	04803 W		113	5.8	01 1	6 12	9 1	1968	EOE	00	8		3840	17	16	2	3	×1	4 6			0008
							WA	1	WIF		BAR		AIR TE	7	VIS	NO.	SPEC	TAL	1						
							COLOR	TRANS.	DIR.	SPEED OR FORCE	MET		DRY	WET	COD	OBS. DEPTHS	OBSERV								
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	MESSENGI	CAST	CAR			Т	1	1		-	127			1	. Δ D	<del></del>			1			[	_		_
	TIME HR 1/10	of NO.	TYP		(m)	1	*C	2 .	·	SIGN	1A-T		AALY-XI		DYN. M x 10 <sup>3</sup>	. VELO		02 ml/		04-P - at/I	TOTAL-F	NO2-N	NO3-N	\$1 O4=\$1 9g = 01/1	рн
	710	<del>   </del>				<del>                                     </del>				_		-		-	* 10	+	-		+ -	-		-	10		-
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			S T	D 005	0	1	807	363		262			782		089										
	129	9	083	005	1	1	807	362	96	262	6					151	-								
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			ST			-	810	363	4	262	9	001	778	7 (	178	152	200								
	129	)	ORS			_	810	363		262						152	01								
			ST				752	363		264			654		220	151									
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	129	′	OBS	_			691	3630		265						151									
	129	,	OBS			_	631	362		266	_	001	482	2 0	1336	151									
	127	·	ST				627 563	362		266		001		, ,		151									
			5 T				492	3598		267			4346 383		409	151 151									
			ST			_	343	3579		269	-		270		612	150									
	129	)	085				328	3572		269		001	210	, ,	012	150									
			ST				185	355		270		001	1632	2 0	734	150									
	129	)	085				156	354		270		001	105		, , , ,	150									
			ST	D 0600	)	1	023	3533		271		001	022	7 0	843	150									
	129	)	085	10626	5	0	980	3528	3.5	272	3					150									
			ST	D 0700	)	0.	822	3517	7	273	9	000	824	1 0	936	149									
			51		)		558	350	7	275	5	000	6660	0 1	010	149	707								
	129	)	085				600	3503		276	0					148	91								
			ST				574	3503		276			5896		073	148									
	1.00		ST				529	3503	-	276		000	5416	5 1	130	148									
	129		085				499	3503		277	_			_		148									
			ST				490 459	3502	-	277			5090	_	182	148									
			ST				459 432	3499		277 277			4934	_	232	148	_								
	129	,	085				414	3497		211 277		000	4754	+ 1	281	148									
			ST				411	3498		277		000	466	Q 1	328	149									
			ST.				396	3497		277			4585		374	149									

REFERENCE SHIP		SITUDE BOUTE	MARSOEN SOUARE	STATION TIM	YEAR	ORIGINATO CRUISE STAT	ION	10	MAX. DEPTH OF S'MPL'S	Q85ER	AVE VATIONS	WEA- THER CODE	CLOUD COOES		5.1	DOC ATION MBER
NO.	1/10	- 1710				E08 009		4837	20	21 2	5	× 8	5 8	ļ	0	009
311203  HU   3448	N   048	16 W	113 48 0		10	AIR TEMP.	2	NO.			,- ,					
			COLOR		SPEED MET	ER ORY W	ET CODE	0.05	SPECIA Deservat							
			COOE		FORCE (mb	•1 BULB B	JLB	GEFTHS		_						
				22 9	518 22	4   185   1	76 5	14								
				I		SPECIFIC VOLUME	₹ ∆ D DYN. M	5001	ND G	) 2 ml/l	PO4-P	1014L-P	NO2-N	NO3~N	5104-51	ρН
MESSENGE CAST	TYPE	DEPTH (m)	7 70	5 1/4.	SIGMA-T	ANOMALY-1107	x 10 <sup>3</sup>	. AEFOC	CITY	7 mor	µg • 61/1	μg · α1/1	10 - Qu	yg - a1/1	μg - α1/1:	
HR 1/10							-									
			. 705	3634	2633	0017040	0000	151	80	,	'					
	STO	0000	1795 1795	36341	2633	001,040	0.00	151								
129	OBS	0000	1796	3634	2633	0017089	0017									
	510 510	0020	1796	3634	2633	0017133	0034	151	83							
	STD	0030	1797	3634	2632	0017182	0051	151	.85							
129	OBS	0032	1797	36342	2632			151								
127	STD	0050	1798	3634	2632	0017271	0086									
129	085	0064	1799	36344	2632			151								
*2 /	STD	0075	1799	3635	2632	0017359	0129									
129	085	0097	1798	36346	2632			151								
	STD	0100	1798	3635	2633	0017408	0173									
	STD	0125	1790	3637	2636	0017182	0216	151								
129	085	0130	1787	36368	2637 2642	0016648	0258									
	STD	0150	1764	3637 36360	2654	0016646	0230	151								
129	OBS	0194	1714 1708	3635	2655	0015630	0339	151	187							
	STD	0200 0250	1651	3625	2661	0015217	0416	5 151	177							
130	STD OBS	T0260	1639	36228	2662			151	175							
129	SID	0300	1592	3612	2664	0014998	049									
	SID	0400	1453	3587	2676	0014106	063									
	STD	0500	1284	3563	2693	0012672	077									
129	085	0518	1250	35591	2697				084							
	SID	0600	1071	3540	2716	0010569	088		033 006							
129	OBS	0648	0978	35303	2725	0008851	098		980							
	STD	0700	0887	3523	2734	0000001	0 9 0		947							
129	OBS	T0775	0771 0738	35138 3512	2745 2748	0007477	106	_	939							
	STD	0800 0900	0623	3507	2760	0006303	113		909							
	STD	1000	0535	3503	2768	0005504	119		890							
130	OBS	1037	0510	35021	2770		-	14	886							
129	STD	1100	0489	3501	2772	0005150	124	7 14	888							
	STD	1200	0460	3500	2774	0004948	129	-	892							
129	OBS	T1288	0439	34990	2776				898							
• • •	STD	1300	0437	3499	2776	0004820		_	899							
	SID	1400	0422	3498	2777	0004792	_	_	910							
	STD	1500	0408	3497	2778	0004773	144		921							
129	OBS	1623	0395	34962	2778	0004730	156		953							
	STD	1750	0385	3496	2779	0004729	100		984							
129	085	11958	0375	34968	2781			14	, 0 4							

AT CODE	REFERENCE	SHIP	LATITUDE	1,	ONGITUDE EX	MZ ES	DEN I	STATION *		ORIG NAT		DEP* - AT		Α,!	A fA		4,
		CODE		1	1/10 E	10.	11		_ `			1 1	18 18		76-12		AT N N VISIO
	11203	HU	3455 N	0.	4801 W	113	48	01 18	130 1965	8 E08 010		4444 1 14	+   21 .3	T4 * *	y 1 8	+	001
STO   ORD   1795   3634   2633   ORT   O						ĺ	W.A.	TER V	SAI	80- AIR TEAP	**	Nº1			4 11	(	1.
									39		WET Jacon	1183					
						}			+ ****		.010	-					
STO   ORS				1			133	518 27	1   175   1		14						
130		MESSENGR			DEPTH (m)	Ť	*C	s ·	51G M A = 1		S L D		0 - m   1	FO4−c →	nizier na.	1.	4-5
130		HP 1/10				1				ANUMACILIO		FLOCITY		3 -	3 1 29+1	27	al , ÇH
130										1						Τ ' '	
STD   0010   1796   3634   2632   001711b   0017   15181		120								0017055	0000	15180					
STD   OO20		130										15180					
130				-													
STD   0030   1799   3634   2631   0017275   0061   15186   15189   15180   1		130								0017179	0034						
130		130								0017075							
STD   0050		130								0017275	0051						
130		1 _ 0								0017075	00						
STD		130								0017-43	0086						
130										0017217	0120						
STD   0100   1795   3635   2637   0017356   0173   15196		130				_				1017317	0154						
STO   0125   1794   3635   2633   0017421   0216   15200     STD   0150   1773   3634   2638   0017026   0259   15196     STD   0150   1773   3634   2638   0017026   0259   15196     STD   0200   1677   3628   2657   0014427   0340   15177     STD   0250   1578   3613   2668   0014458   0415   15153     STD   0300   1497   3599   2676   0013871   0486   15134     130   085   70360   1422   35855   2682   15118     STD   0400   1415   3581   2680   0013745   0624   15122     130   085   0451   1355   35707   2685   15110     STD   0500   1217   3555   2700   0011950   0752   15069     130   085   70538   1124   35446   2710   15042     STD   0600   034   3540   2722   0009909   0862   15020     STD   0700   0882   3529   2739   0008329   0953   14979     130   085   0724   0844   35265   2743   14968     STD   0800   0695   3512   2754   0006832   1029   14922     130   085   70893   0566   35013   2763   14884     STD   0900   0562   3501   2763   0005871   1092   14884     STD   0900   0562   3501   2763   0005871   1092   14884     STD   0905   0569   3501   2769   0005034   1201   14885     STD   1100   0483   3500   2777   0004694   1297   14898     STD   1300   0433   3500   2777   0004694   1297   14898     STD   1400   0418   3499   2778   0004666   1344   14908						-				0017356	0173						
130 OBS 0139 1794 36347 2634 15202 STD 0150 1773 3634 2638 0017026 0259 15196 130 OBS T0187 1705 36329 7654 15194 STD 0200 1677 3628 2657 0015427 0340 15177 STD 0250 1578 3613 2668 0014458 0415 15153 STD 0300 1497 3599 2676 0013871 0486 15134 130 OBS T0360 1422 35855 2682 15118 STD 0400 1415 3581 2630 0013745 0624 15122 130 OBS 0451 1355 35707 2685 1510 STD 0500 1217 3555 2700 0011950 0752 15069 130 OBS T0538 1124 35446 2710 15042 STD 0600 1034 3540 2722 0009909 0862 15020 STD 0700 0882 3529 2739 0008329 0953 14979 130 OBS 0724 0844 35265 2743 14968 STD 0800 0695 3512 2754 0006832 1029 14922 130 OBS T0893 0565 35013 2763 14984 STD 0900 0562 3501 2763 0005871 1092 14884 STD 0900 0562 3501 2763 0005871 1092 14884 STD 1100 0483 3502 2773 0005034 1201 14885 STD 1100 0483 3502 2773 0004666 1344 14908																	
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130				STD	0150	-				0017026	0254						
STD   0200   1677   3628   2657   0016427   0340   15177   STD   0250   1578   3613   2668   0014458   0415   15153   15162   1510   0300   1497   3599   2676   0013871   0486   15134   15118   1518   15118   15118   15118   15118   15118   15118   15118   1518   15118   15118   15118   15118   15118   15118   15118   1511		130	08	3.5	T0187												
STD   0250   1578   3613   2668   0014458   0415   15152     STD   0300   1497   3599   2676   0013871   0486   15134     130   OBS   T0360   1422   35855   2682   15118     STD   0400   1415   3581   2680   0013745   0624   15122     130   OBS   0451   1355   35707   2685   15110     STD   0500   1217   3555   2700   0011950   0752   15069     130   OBS   T0538   1124   35446   2710   15042     STD   0600   1034   3540   2722   0009909   0862   15020     STD   0700   0882   3529   2739   0008329   0953   14979     130   OBS   0724   0844   35265   2743   14968     STD   0800   0695   3512   2764   0006832   1029   14922     130   OBS   T0893   0565   35013   2763   14884     STD   0900   0562   3501   2763   0005871   1092   14884     STD   1000   0519   3501   2769   0005406   1149   14883     STD   1100   0483   3502   2773   0005034   1201   14885     STD   1200   0454   35015   2773   14886     STD   1300   0454   35015   2773   0004795   1250   14890     STD   1300   0433   3500   2777   0004694   1297   14898     STD   1400   0418   3499   2778   0004666   1344   14908			4	STD	0200					0015427	0340						
STD   0300   1497   3599   2676   0013871   0486   15134   15118   15110   1			9	STD	0250	15	78										
130			9	STD	0300	14	97	3599	2676	0013871							
STD   0400		130	08	3.5	T0360	14	22	35855	2682								
130					0400	14	15	3581	2690	0013745	0624						
STD   O500   1217   3555   2700   O011950   O752   15069		130				13	55	35707	2685								
130 OBS 70538 1124 35446 2710 15042 STD 0600 1034 3540 2722 0009909 0862 15020 STD 0700 0882 3529 2739 0008329 0953 14979 130 OBS 0724 0844 35265 2743 14968 STD 0800 0695 3512 2754 0006832 1029 14922 130 OBS 70893 0565 35013 2763 14884 STD 0900 0562 3501 2763 0005871 1092 14884 STD 1000 0519 3501 2769 0005406 1149 14883 STD 1100 0483 3502 2773 0005034 1201 14885 130 OBS 1107 0481 35015 2773 14886 STD 1200 0454 3501 2776 0004795 1250 14890 STD 1300 0433 3500 2777 0004694 1297 14898 STD 1400 0418 3499 2778 0004666 1344 14908								3555	2700	0011950	0752						
STD   0700   0882   3529   2739   0008329   0953   14979   14968   14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968   14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968   14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968   14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968   14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968   14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968   14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968   14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968   14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968     14968   14968     14968		130						-	-			15042					
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130 OBS T0893 0565 35013 2763 14884  STD 0900 0562 3501 2763 0005871 1092 14884  STD 1000 0519 3501 2769 0005406 1149 14883  STD 1100 0483 3502 2773 0005034 1201 14885  130 OBS 1107 0481 35015 2773 14886  STD 1200 0454 3501 2776 0004795 1250 14890  STD 1300 0433 3500 2777 0004694 1297 14898  STD 1400 0418 3499 2778 0004666 1344 14908		130															
STD   0900   0562   3501   2763   0005871   1092   14884     STD   1000   0519   3501   2769   0005406   1149   14883     STD   1100   0483   3502   2773   0005034   1201   14885     130   085   1107   0481   35015   2773     14886     STD   1200   0454   3501   2776   0004795   1250   14890     STD   1300   0433   3500   2777   0004694   1297   14898     STD   1400   0418   3499   2778   0004666   1344   14908		120								0006832	1029						
STD 1000 0519 3501 2769 0005406 1149 14883 STD 1100 0483 3502 2773 0005034 1201 14885  130 OBS 1107 0481 35015 2773 14886 STD 1200 0454 3501 2776 0004795 1250 14890 STD 1300 0433 3500 2777 0004694 1297 14898 STD 1400 0418 3499 2778 0004666 1344 14908		130															
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STD 1400 0418 3499 2778 0004666 1344 14908																	
100 005 71100 0117																	
14912		130								0004000	1344						
		130	08	S	T1429	04	15	34984	2778			14912					

REFER	_	SHIP	LATITU	DE	LON	GITUDE	DRUFT	V/RS SOU		STATIO	N TIM		YEAR	CPUISE	ORIGIN	STATIO	N	1	DEPTH 10	MAX. DEPTH OF	000	BVAW SMCITAVAS	cons	CLOUD		5	NODC TATION
TRY	NO.	CODE	1	1/10		1/10	o z	10*	12	MO DA	YHR	1/10		NO,	1	NUMBI	9	81	MOTTO	S'MPL'	5 DIE	HGT PER SE	A	TYPI AN	7	- + "	0.0.01.
+			2502	-	0/.6	3045W	Ι,	113	58	01 20	0 0	12 1	968	F08	01	1		2	341	14	01	2 2	×1	8 2	1	-	001
31	1203	HU	3502	N i	046	5045W	1 1	113	WA		WI		BARG		AIR TE			Ť	ND.		CIAL						
								ĺ	COLDR	TRANS.	D1R,	SPEEC	METE	R	DPY	WE		20	DRS. DEPTHS		A TIONS						
									CODE	te-1		FORCE	(mbs	.1   6	BULB	BUL	8	1									
											36	504	31	5 1	57	13	3 9	- [	14						,	,	
					- 1					1				5260161	c volt	LAA S	≥ △	D	SOL	JND		PO4-P	TOTAL	1402-N	NO3-N	5104-5	
		TIME	GA CAST	CAI		DEPTH	(m)	ī	°C	2 .	4.	SIGN	T- A		AALY-X		DYN, x 10		VELO	CITY	0 g ml/l	μg = 01/I	μg = 61/1	µg = a1/1	yg - a1/1	μg - α1/	1
		HR 17					-		_	-						-			+								
			-		į		- 1			1						. 1			1			1	1	1	1	1	,
				5	ΙO	000		_	800	364		263		001	653	4	000	U	15								
		0]	12	OB.	S	000		_	800	364	-	263		0.0.1		,	001	7		182 184							
					TO	001		_	802	364		263			651		001										
					ΤD	002			804	364		263		001	659	12	003	3		186 187							
		0 :	12	ОB		002			804	364		261		00.1	1662		005	٥		188							
					TD	003		_	804	364		261		001	002	-4	000	9		191							
		0 :	12	ОВ		004			804	364		26		001	670	16	008	13		192							
		_		_	TD	005		_	804	364		26		00.		,	1,00			195							
		O.	12	ОВ		007			805	364 364		26		on:	1681	12	012	5		196							
					TD	007			805 805	364		26		00.			(12	_		199							
		0	12	OB		010		_	804	364	_	26		0.0	1688	<b>3</b> 3	016	7		200							
					T D T D	010			803	364		26			1694		020			204							
		0	12	0B	_	014			802	364		26							15	206							
		V	12		TD	015			802	364		26		00	1700	9	025	52	15	207							
		(1	12	OB		018			802	364		26							15	213							
		0	1 2		TD	020			797	364	-	26		00	1719	50	033	7	15	214							
					TD	025			765	363		26	42	0.0	1705	55	042	23	15	212							
				_	TO	030			717	362	9	26	48	0.0	1658	84	050	7 (		205							
		0	12	OB		T038			604	361	85	26	67						_	183							
					TD	040			561	361	1	26	71	00	146	97	066	53		172							
		0	12	08		046		1	436	358	392	26	8.2							141							
					Tp	050	0	]	389	358	3.2		86	0.0	134	17	080	] 4		130							
		0	12	08	5	105€	3		288	356	-		96							105							
			_	5	TO	060			190	355			05		117		093			076							
				S	TD	070			964	352			24	00	099	27	10	38		009							
		0	12	OB	3.5	074			883	351			31			0.				985							
					TD.	080			808				43		081		113			966							
				5	J.D	090			690				60	0.0	064	66	120	υI		937							
		0	12		3.5	092			0665	35			63	0.0	0.5.4	2.2		, ,	_	931							
					STO	100			586				68		056	_	12			+912 +896							
					STO	110			0508				72	00	051	00	13	10		+890 +892							
		C	12		3.5	114			0481		019		73	0.0	048	n s	13	66		4892 4891							
					STD	120			0457				776 778		046	-	14			1897							
		_			STD	130			0432			_		00	040	90	14	10		910							
		0	12	08	35	T13	78	,	0432	34	999	4	777						1.	10							

COOL		1/10	LONG	11UDE 11/10	200	SQU	DEN ARE		GMT	TME 4R,1/10	TEAR	CRUISI		ATOR'S TATION TUMBER		DEPTH TO BOTTOM	MAX DEPTH OF 5'MPL'S	OB DIK.	WAVE SERVATIONS		WEA- THER COOE	CLO	DES		5	NODC STATION NUMBER
3 HU	350	3 N	048	09 W	1	13	58	01	20	130	1968	E08	012	,	1	2162			1 -1 -1	-					- +-	
	, ,,,,,,,	• ,	. , .		1 1	i i	WA		_	WIND		1	AIR TEN		-4	3163	14	33	2 3	j	× 1	7	5		1	0012
							COLOR	TRANS	DIR.	SPEED OR FORCE	BAR MET (mbi	EP.	DRY BULS		VIL ODE	NO. OBS. DEPTHS	SPEC AVR3280									
								1	06	510	30	5 1	82	142	9	14										
MESSEN TIME HB 1/	CAST F OF NO.	CAR		DEPTH (A	1	1	*C	s	•/	SIGA	MA-T		C VOLUA		. M.	\$OU VELO		O 2 m1/	204⇒P µg + 01/1		AL-F	NO2-		NO3-N vg - at/l	\$1 O4=\$1	
	1																									1
1.	30	51		0000			87	36		26:		001	6474	000	0.0	151										
1.	, •	083		0000			87		393	26:						151										
		S T S T		0010			86	363	-	263			6527			151										
1:	30	0BS	_	0020			85	363		263		001	6579	00:	3 3	151										
1.	, ,	5 T		0025			85	363	_	263		00-				151										
1:	30	0BS	_	0030			85	363		263		001	6623	005	0	151										
1.	,,,	ST		0049		-	86	363		263						151										
		S T		0075			86	363		263			6712			151										
13	2 (	085		0075			86	363		263		001	6791	012	15	151										
1 -	, 0	ST		0100			86	363		263						151										
13	3.0	085	_	0100			84	363		263		001	6903	016	7	151										
	, 0	S T		0125			84	363 363		263		001	700.			151										
13	3.0	OBS		0149			84	363		263 263		001	7004	020	19	151										
• -		ST		0150			84	361		263		001	7092	0.75	2	152										
		ST	_	0200			80	364		264			1092 6496			152										
13	30	OBS	_	0200		_	89	364		264		001	0470	033	0	152										
		ST		0250			70	364		264		00.1	6450	0/3		152										
		ST		0300			30	363	_	265			6185			152										
13	30	OBS		0381		_	22	361		266		001	0100	050		152										
		ST		0400		15		361		266		001	5084	0 / 6		151										
13	0	OBS		0470		14		358	-	268		001	JU 84	065	0	151										
		ST		0500		13		357		268		001	3502	0.79	Q	151 151										
13	10	OBS	. 1	0557		12		355	-	269		001	J J G Z	019	7	150										
		\$ T		0600		11		354		270	-	001	1428	092	4	150										
		ST		0700		09		351		272			9521	102		149										
13	0	OBS		0737		0.8	_	351		273		300	· / C 1	102	,	149										
		ST	0	0800		07		351		274		000	7594	111	4	149										
13	0	OBS	T	0897		06		351	-	276				111	-	149										
		ST	D	0900		06		351		276		000	5163	118	3	149										
		ST	٥	1000		05		350		276			5479			149	-									
		ST	0	1100		04		350		277			5103	129	_	148										
13	0	OBS		1127		04	-	350	-	277		500.	-100	10,	•	148										
		ST	0	1200		04		350		277		0004	4955	134	4	148										
																	* a-1									
13		ST	0	1300		04	42	349	9	277	6	0004	4876	139	4	149	0.1									

															T			_				
REFERENCE	SHIP			=	M/RS SQU	DEN	STATION T		YEAR .		ATOR'S		DEPTH	M AX DEPTH	ORS	WAVE ERVATION	S THE			N ST	ODC	
CTRY ID.	CODE	LATITUI *		LONGITUDE D			MO DAY H		I CAR		STATION NUMBER		BOTTOM	S'MFL"S	l .	HGTPLE	000				MBER	
- <del></del>			1/10		10*	1		1				-		+		1		+ + -			012	
311203	HU 3	506	N	04816 W	113			_	968	E08 01		<del></del>	4155	13	11	2 3	X1	6 16	1	(	013	
						WA		SPEED	BARO			· vis.	NO. 085.		CIAL							
						COLOR	TRANS DIR.	OR	METER	DRY	BULB	CODI	DEPTHS	OBSERV	A TION S							
							110	-		102	100	17	14									
							10	515	430	193	188		1	L		_						$\neg$
		CAST	CARD		,	℃	5 */**	SIGM	A -T	SPECIFIC VOL	ME 2	AN. M	501	UND	02 ml/l	PO 4~P	TOTAL-		NO3-N	51 O 4 = 51	ρH	Š
	HR 1/10 T	NO.	7 4 9 5			-				ANOMALY-E		x 10 <sup>3</sup>	VEL	OCITY		µg + 01/	νg - α1/	µg + 61/1	µ <b>g -</b> α1/1	μg = φ1/1		9
	i		ST	0000	1 1	781	3639	264	.0 '	001637	ດໍດ	000	15	176		1						
	128		085	0000		781	36388	264						176								
	120		ST			785	3639	263		001648	4 0	016	15	179								
			ST			787	3639	263	9	001656	6 0	033	15	181								
	128		OBS	0027	1	788	36391	263	ρ				15	183								
			sT	D 0030	1	788	3639	263	8	001661	7 0	050	15	183								
			ST	0 0050	1	787	3639	263	9	001666	3 0	083	15	186								
	128		085	0050	1	787	36391	263	9					186								
	128		085	0073	1	786	36391	263	9					189								
			ST	0075		786	3639	263		001673	3 0	125		140								
	128		08\$		_	786	36389	263						193								
			ST		-	786	3639	263		001682		167		194								
			ST	-		786	3639	263		001690	6 0	209		198								
	128		08.5			786	36390	263		00110		25.1		201								
			5 <b>T</b>			788	3641	264		001689	4	251		203								
	128		085			791	36485	264		00177	0 0	1334		2 <b>11</b> 210								
			ST			783 749	3647 3642	264 265		001648		1334		208								
			ST		-	716	3637	265		001599		497		206								
	128		ST OBS			674	36306	266		001//-				203								
	120		ST			602	3618	266		001510	1 0	652		186								
	128		085			490	35982	267		001710		0,5		157								
	120		ST			373	3578	268		001337	8 0	795		125								
	128		085		_	283	35636	269					15	099								
	120		ST			114	3543	271	10	001113	13 (	917	15	049								
			ST		0	900	3520	272	29	000928	35 1	019	9 14	985								
	128		085	_	0	887	35188	273	3.1				14	981								
			ST	D 0800	0	764	3515	274	47	000765	6 1	104	14	949								
	128		OBS	T0875	0	679	35119	275	56				14	928								
			51	D 0900		654	3510	279		000653		175		922								
			ST			56°	3505	276		000582		1237		904								
			ST			505	3502	2 <b>7</b>		000529	71 7	1292		894								
	128		OBS			500	35016							894								
			51			461	3500	27		000496		1344	_	893								
			51			439	3499	27		000484	6	1393		900								
	128		083	T1350	0	435	34990	27	16				14	907								

). ).	SHIP	LATI	30.07	LONGITUDE	sac	SDEN	STATION	N TIMI	YE.	AR	DRIC CRUISE		TOR'S	DEPTH	DEPT		WAVE BSERVATIONS		WEA-	CLOUD			NODC
			1/10	1/10	10*	1.	MO DAY	Y HR 1	/1c		NO.		JAN BED	BOTTO	U S'MPL		HGT PER S		DDE	CODES		5	MOSTATS MARINUS
03	HU	351	3 N	04759 W	113	57	01 22	22	0 19	<b>58</b>	E08 0	1 /		2200						TYP] A W	1		.04.164
						WA		WIN	n T		4.12	TEMP	9 4	3200	20	11	2 2	1 2	X 1	1 6			0014
						COLOR	TRANS D	. 3	PEED	BARO METER			WET COD		SP	ECIAL							
						CODE	1862			(mbe)	BULB		BULB	DEPTHS	OBSER	VATIONS							
_							2	2 5	19 (	064	186		182 7	14	_		1						
- 1	MESSENGE	CAST	CARD		T		1			7		-		1	_		-						_
	TIME 0	NO.	TYPE	DEPTH (m)	1	,C	5 %	.	SIGMA-	.7	SPECIFIC VO		DYN. N	. 50	OCITY	02 ml/	PO 4-P	ATOT		ND2-N	NO3-N	SI 0 4-51	
۲			-	+	+		-	-		-+			x 103	V 6 C	OCH		±2 = 01/i	NB - 1	01/1	140 - BA	νg = α!/l	νg - 01/1	рН
- 1		I	 C T f	2000			1			- 1													+
	220		STO			771	3636		2640		00163	25	0000	15	173		1		,			1	
	220		STE	0000		771	3636		2640					15	173								
			STE			771	3636		2640		00163		0016	15	175								
			STE	_		772	3636		2640		00164.		0033		176								
	220		OBS			772	3636		2640	1	001646	64	0049	15	178								
	220		510	0033		772	36356		640					15	178								
	220		085			773	3636		639	(	001658	83	0082		182								
	220		510	0065		774	36358	-	639						184								
	220		OBS			773	3636		640	(	001664	45	0124	15	186								
	220		STD	0098 0100		772	36364		640					15	189								
			STD			772	3636		640		001661		0165	15	190								
	220		OBS	0123		772	3637		641	(	001674	43	0207	15	194								
	2.2.0		STD	0151		772	36368		641					15	195								
	220		OBS	0196		771	3640		643	(	01656	56	0249	151	198								
			SID	0200		59	36439	_	649					152	202								
			STD	0250		57	3644		649		01615		0331	152	202								
	220		OBS			27	3639		653	(	01595	5	0411	152	201								
			STO	0260 0300		19 74	36380		654	_				152	200								
			STD	0400		33	3629		658		01561		0490	151	192								
			STD	0500		54	3604		672		01459		0641	151	163								
	220		OBS	T0519			3577		690	C	01306	1	0779	151	1.6								
			STD	0600		16 28	35712	_	693					151									
	220		085	0650		14	3544		709	0	01131	9	0901	150	154								
			STD	0700	08		35304	_	718	_				150									
	220		085	10779	07		3519 35060		731	0	00914	4	1003	149									
			SID	0800	07		35050		744	^	0	_		149									
			STD	0900	06		3511		746		00760		1087	149									
			STD	1000	06		3514		756		00677		1159	149									
	220		OBS	1041	06		35159		766	0	00590	1	1222	149									
	_		STD	1100	05	_	3512		770		005==	_		149									
			STO	1200	0.5		3506		772		00531		1278	149									
			510	1300	04		3501		774		00505		1330	149									
	220		OBS	1300	04	_	35014		776	U	00488	-1	1380	149									
	-		STD	1400	04	-	35014		776		0			149									
			STD	1500	04		3499		777		00483.	_	1429	149									
	220		OBS	1626	040	-	3499 34976		778	U	00478	7	1477	149									
			STD	1750	039	_	34916 3497		779					149									
	220		OBS	T1952	03.	-	_		779	C) (	00475	4	1596	149									
			000	11776	03	10	34968	2	781					149	84								

									MAX.			_	610110			
REFERENCE		ž	MARSDEN	STATION TIM		ORIGINA		DEPTH	CEPTH		WAVE RVATIONS	WEA-	CODES		517	TION
CTRY IO. CODE LATITU	DE LON	SITUOE SON	SOUARE	(GMT)	YEAR	CRUISE ST	ATION #38M ti	BOTTOM	S'MPL'S		HGT PER SE	COOE	TYPL AMI		NU	MBER
CODE NO.	1/10	1/10		O DAY HR.		-		1,500			3 5	×1	5 6		0	015
311203 HU 3505	N 048	318 W	113 58 0					4590	16	30	9 12 1	X I	1 3 10	1	1 0	0151
( ) 2 2 2 2 3 1 1 2 1 2			WATE	R WI	ND BAR		VI		SPE	DIAL						
			COLOR		SPEED MET		WET CO	DEPTHS	OBSERV	ATIONS						
			COOE	$\rightarrow$	FORCE			1								
				31	514 16	3 183	183 7	14	1							
MESSENGE CAST	CARO		1 %	s */	SIGMA-T	SPECIFIC VOLUM	AR SA	o so	UNO	07 ml/l	PO4-P	TOTAL-P		но₃-н	\$1 O4\$1   1/10 - 04	рн С
TIME OF NO.	TYPE	OEPTH (m)	1 , ,	,	Joanne	ANDMALY-X10	X 10	J AFF	.00111		ا/اه - ور	μg • e1/l	μg - αt/l	μg - 01/	pg - 0.7.	
HR 1/10			+						$\neg \neg$							- 1
	!		1700	3642	2638	0016583	000	ດ ່ 15	182							
	STD	0000	1799	36417	2638	001030	, 000		182							
127	085	0000	1799	3642	2637	001663	9 001		183							
	STD	0010	1799 1800	3641	2637	001669			185							
	STD	0020	1800	3641	2637	001674			187							
	STD	0030	1800	36412	2637				187							
127	OBS	0030	1791	3640	2638	001670	6 008		187							
	STO	0050	1788	36390	2638	001010			188							
127	085	0061	1789	3640	2639	001671	9 012	_	191							
_	STD	0075	1789	36401	2639	001011	, 011		193							
127	085	0090	1789	36401	2639	001681	8 016		195							
	STD	0100	-	36399	2639	001001			5198							
127	OBS	0122	1788 1788	3640	2639	001687	8 020		199							
	STD	0125	1787	3640	2639	001694			5203							
	STD	0150 0184	1786	36407	2640	0010.			5208							
127	085	0200	1779	3642	2643	001678	1 033	6 15	5209							
	STD		1754	36441	2651				5209							
1,27	085 STD	10246 0250	1752	3643	2650	001624	3 041	8 1	5209							
		0300	1716	3635	2653	001614		9 1	5206							
	STO STD	0400	1604	3613	2662	001550		8 1	5186							
	STD	0500	1439	3587	2679	001410	1 080	6 1	5147							
127	OBS	0563	1308	35682	2692	_		1	5112							
127	STD	0600	1206	3553	2701	001213	6 093	37 1	5082							
	085	T0671	1034	35312	2716			1	5030							
127	STD	0700	0980	3529	2723	000998	4 104	48 1	5015							
	STO	0800	0816	3521	2743	000803	3 113	38 1	4970							
127	085	0885	0702	35154	2756			1	4939							
121	510	0900	0685	3514	2757	000669	3 12	11 1	4935							
	STD	1000	0589	3507	2764	000595	8 12	74 1	4912							
127	OBS	1097	0520	35018	2769				4900							
121	STD	1100	0519	3502	2769	000549	5 13:		4900							
	STD	1200	0491	3501	2772	000525	9 138		4905							
	STD	1300	0465	3501	2774	000504	6 14		4911							
127	085	1364	0450	35007	2776				4916							
121	STD	1400	0442	3500	2776	000491			4918							
	STD	1500	0421	3499	2778	000480	1 15		4926							
127	085	71631	0398	34968	2778			1	4938							
-2.																

REFERE	NCE	SHIP				LE MA	RSOEN	STATION	TIME		01	RIGINA	TOR'S	T	Brank T	MAX.					-			,	
TAY	10. NO.	CODE	LATITU	1/10	LONGITUDE 1/10	[주 달]	U A RE	IG M		YEAR	CRUISE NO.	ST	ATION	-	HITTON CT MOTTON	DEPTH			TONS	THE	COL	DES		STA	TION
311	203	HU	3454	-	04809 W	113	1	01 24	125	1968	-			-	4462	S'MPL'S		1	PER SE	-	LAME				MBER
						. ,	WA		WIND	BAI	1 41	R TEM		- 1	NO.	_15	35	3	4	X 2	6	8		01	016
							COLOR	TRANS. DI		ME	ER DR	γ	WET	CODE	280	SPEC OBSERVA									
							0000	31	5 514		-	-	BULB					-							
	Γ.							13.	314	24	7 17	2	167	7	14			<u>L</u> ,							
	- 1	MESSENGR TIME 0	LCAST	CAR		lm)	ეზ 1	s */	51G	M A - T	SPECIFIC 1		E SA	Δ Q.	SOUN		O2 m1/	PC	04-0	TOTAL-	NO2-	N NO3	-N 510	4-51	
	ľ	HR 1/10	-					-					X	103	VELOC	CITY		P. B	- 01/1	⊌g • 01/1	ט - פע			01/1	рН
	- 1			ST	D 0000	, ,	704		1				1												
		125		085			786	3642	26		0016	277	0.0	00	151							'	'		
		12)		51		_	786	36417		_					151										
				51	_		787 <b>7</b> 89	3642	26		0016		00		151										
		125		0B S		-		3642	26		0016	419	0.0	33	151	_									
				ST		_	789 789	36414			001:				1510										
		125		085		-	789	3642 36418	26 26		0016	466	0.0	49	1514										
		• • • •		51		_	789	3642			0014				1518										
		125		OBS		-	790	36415	264		0016	016	00	8 2	1518										
				ST		_	790	3642	264 264		0016				1519										
		125		OBS		_	790	36414			00166	546	01:	24	1519										
				ST		-	790	3641	261		0016				1519										
				ST		-	789	3641	264		0016		01		1519										
		125		08.5		_	789	36407			00100		020	) /	1519										
				ST			789	3641	263		00169	2/. ()	02	- 0	1520										
		125		OBS	0192	_	787	36403			0010	74 U	02:	90	1520										
				ST		_	787	3640	263		0017	27	033		1520										
				ST		_	777	3636	263		00173		042		1521 1521										
				ST	0300		746	3632	264		00170	-	050		1521										
		125		OBS	T0383		546	36260	266		00110	12	030	, ,	1519										
				ST	0400		512	3619	266		00152	53	066	. 0	1518										
		125		OBS	0478	14	460	35909	267				000	, ,	1515										
				ST	0500	14	+20	3585	268	12	00138	46	081	4	1514	_									
		125		085	T0574	12	281	35653	269	5					1510	_									
				ST(		12	213	3556	270	2	00120	53	094	3	1508										
				ST		0 9	889	3528	272	1	00101		105	-	1501										
		125		OBS	0779		350	35148	273	3				-	1497										
				ST			328	3515	273	7	00086	50	114	9	1497										
		105		ST			730	3517	275	3	00071	60	122		1495	-									
		125		OBS	0984		57	35184	276	4					1493	-									
				SI			43	3517	276	5	00060	02	129	4	1493										
				STO	_		66	3510	277		00055	44	135		1492										
		126		STO			0.5	3505	277	-	00051	86	140	5	1491										
		125		OBS	1247		82	35026	277						1490	9									
				STO			61	3502	277		00049		145	6	1491	0									
				SIC			33	3501	277		00047		150	4	1491	5									
		125		STO			21	3499	277		00047	71	155	2	1492	6									
				085	T1513	0.4	21	34992	277	0					1492										

REFERENCE	MARSDEN	STATION TIME		ORIGINATOP'S	DEPTH DEP	WAVE	WEA- CLOUD	NDOC
CTAY ID. CODE LATITUDE LONGITUDE	SQUARE	(GAIT)	YEAR	CRUISE STATION	10 1 6		THER CODES	NOITATE
1/10 1/10 Z	10. 1.	MD DAY HR.1/10	1	NO. NUMBER	MOTTOR	PL'S DIR HGT PER SEA	CODE TYPL AMT	NUMBER
311203 HU 3503 N 04811 W	113 58	01 25 128	1968	E08 017	4023 1	3 32 3 3	X1 8 6	0017
		ATER   WINO	1	AIR TEMP. C	но.		1 - 1 - 1	- 1
	COLO	D TALLE SPEE	BARC METE		000	SPECIAL		

					COLOR	TRANS	DIR.	SPEED OR FORCE	METE		₩ BU			OBS. EPTHS		VATIONS							
							35	517	196	149	10	80	7	14									
MESSENGR TIME 6 HR 1/10	CAST NO.	CARO TYPE	DEPTN (m)	,	τς	s	*/	SIGM	A-T	SPECIFIC VOLU		₹ A	∆ D 1. M. 10 <sup>3</sup>		OCITY	02 ml/l	PO4-P un = m1/l	101AL-2 pg - a1/1	NO2~N ug - q1/l	NO3-H ug - 01/1	\$1 O4=\$1 99 - 01/1	рН	s C C
																		-					- [ ]
		SID	0000		785	364		264		001626	0	00	00		178								
128		OBS	0000		785	364		264			_	~ ~			178								
		STD	0010		786	364		264		001628		00			180								
		STD	0020		787	364		264		001634	3	00	33		181								
128		085	0022		787	364		264							182								
		SID	0030		787	364		264		001636	1	00	49		183								
128		OBS	0045		786	364		264							185								
		SID	0050		786	364		264		001640	9	00	82		186								
128		OBS	0069		785	364		264							189								
		SID	0075		786	364		264		001649	3	01	23		190								
128		085	0090		788	364		264							193								
		STD	0100		788	364		264		001660		01			195								
		STD	0125		788	364		264		001669	9	02	06		199								
128		085	0133		788	364		264							200								
		STD	0150		789	364	+2	264		001681	9	02	48		203								
128		085	T0176		790	364		264							208								
		510	0200		789	364		264		001702			32		212								
		STD	0250		775	364	+ 1	264		001691	5	04	17		216								
		STD	0300	1	745	364	+ 1	265	0	001642	1	05	01	15	215								
128		OBS	T0328	1	720	364	102	265	6					15	212								
		STD	0400	1	635	367	23	266	3	001548	3	06	60	15	196								
128		085	0410	1	618	362	202	266	5					15	192								
128		085	T0486	1	453	359	914	268	0					15	150								
		STD	0500	1	417	358	35	268	2	001378	3	0.8	06	15	140								
		STD	0600	1	172	354	8	270	3	001185	2	09	35	15	069								
128		0B5	0636	1	089	35:	382	271	1					15	045								
		STD	0700	0	929	35	24	272	8	000947	7	10	41	14	996								
128		085	T0790	0	760	35	119	274	5					14	945								
		STD	0800	0	753	35	12	274	6	000770	6	11	27	14	944								
		STD	0900	0	688	35	15	275	7	000666	4	11	99	14	936								
		STD	1000	0	625	35	15	276	6	000588	6	12	62	14	928								
128		OBS	1012	0	617	35	153	276	7					14	927								
		SID	1100	0	562	3.5	13	277	2	000526	8	12	18	14	919								
		STD	1200	0	502	350	7.0	277	5	000499	8	13	69	14	910								
128		OBS	T1262	0	465	350	17	277	5					14	905								

REFERENCE CTRY ID.	SHIP	LATITE	JDE	LONGI	TUOE	DECT	MARS	OEN ARE		TION T		YEAR		ORIGIN			DEPT	DEP	TH O	W A VE		WEA	CLOU			NODC
DDE NO.	CODE	•	1/10		1/10	2 3	10*	1*			HR.1/10		CRU		NUMB		10 80110	_ ^	F		R SEA	CODE	CODE			TATION
311203	HU	3507	' N	0480	02 W		113	58		-		1968	ΕO	8 01			446	2 1	4 33	2 2		× 1	6 6			0018
								WA	•	+	WIND	BAR		AIR TE	,	VIS	NO.	5	PECIAL						,	
								COLOR	1 RANS	DIR.	SPEED	MET		DRY BULB	BUL.	COD	DEPTH	0.055	RVATION	S						
							İ			01	512	21	0	191	18	4 7	14	+		1						
	MESSENGI	CAST	CAR				T		1		1		1,,,,	HEC VOLU		<b>₹</b> △ D	1							1		
	TIME HR 1/10	NO.	TYPE		DEPTH I	m)	1	€	\$	•/	SIG	I-AN		DMAL -11		X 103	l. 1 1	LOCITY	0 2 ml	I PO		0141-P	NO2=N µg - atri	NO3-N vq - al/i	\$1 O4-51	рН
	17.10	1		_					+						-	X 10	+	-	-	-	-			pg - 0.71		
	1	1	ST	D	0000	)	1.	783	36	4.1	264	4.1	100	1622	g	0000	1	5177								İ
	119	9	OBS		0000			783		414	264		00	1022	O	0000	-	5 <b>177</b>								
			ST		0010			784	36		264	-	00	1626	7	0016		5179								
			ST		0020			785	36		264	_		1630		0016	-	5181								
	119	9	085		0024		_	785		419	264			.0,0	0	.0.7.3		5182								
			51		0030			785	364		264		00	1635	0	0049		5183								
	119	9	OBS		0045	1	17	786	364	420	264	-				,		5185								
			51	D	0050	)	17	786	364		264		0.0	1642	9	0082		5186								
	119	7	OBS		0069	•	17	786		422	264	-		40.2			-	5189								
			ST	D	0075	,	17	786	36	42	264	41	0.0	1651	5	0123		5190								
	119	•	085		0091		17	786	364	419	264							5193								
			ST	Ω	0100	)	17	786	364	42	264	+1	0.0	1661	4	0164		194								
			ST	D	0125		17	787	364	42	264	41		1671		0206		5199								
	119	)	085		0137	,	1.7	787	364	418	264	4.1						5201								
			ST	D	0150	+	17	787	364	42	264	+1	0.0	16820	0	0248		5203								
	119	•	OBS		0186	,	17	887	364	418	264	0						5209								
			ST		0200	1	17	783	364	42	264	+2	0.0	16900	0	332	15	210								
			ST		0250		1.7	64	364	41	264	+6	00	1667	9 1	0416	15	212								
			ST	-	0300		17	45	364	<b>4</b> O	265	0	00	1645	7	499	15	215								
	119	)	OBS		0365		17	21	363	392	269	5					15	5218								
			ST		0400		16	67	362	28	265	9	00	15852	2	0660	15	207								
	119	•	085		0454			67	360		266						15	183								
			51	_	0500			57	359		267		0.0	14193	3	1180	15	153								
	119	,	OBS		0552			32	35		269						15	119								
			ST		0600			95	355		270			11998		942		078								
	110		51	-	0700			62	352		272		00	10039	9	1052		8008								
	119	'	085		0733			00	351		272							990								
			51		0800			19	351		274	-		08308		1144	_	970								
	110		ST		0900			11	351		275		00	06826	5	1219		945								
	119		OBS STI		0918			93	35]		275		0.0	0 / 0 6				941								
			5 Ti		1100			13	351	-	276			06006		283		922								
	119	ı	OBS	_				34	350	-	277		00	05465	)	341		907								
	117		STI		1174 1200			90	350 350		277		00	0 = 1 0 0		20:	_	900								
			STI	_	1300			42	349			_		05100		1394		899								
			STI		1400			27	349		277			04886		443		901								
	119		085	-	1427			27	349		277		00	04785	,	492		912								
	117		000	'	1421		04	21	247	790	277	- 1					14	916								

D. C	SHIP	LATITU		LONGITUDE	10.4	M A R	ARE	STATION		YEAR	CRUISE	ATOR'S		DEPTH CT MOTTOB	MAX. DEPTH OF		WAVE ERVATION		WEA- THER CODE	CLOUD		1 9	NODC STATION
10.			1/10	1/	10 -	10*	1	MD DAY	HR.1/10			NUMBER			2, W br.	S DIF	HGT PER	5 E A		TYPE AW	1		
203	HU   3	3502	N (	808+	w	113			125	1968	E08 01			3181	15	0.6	2 3		x 1	8 3			0019
							WA	TER	WIND	BARO	A IR TE	MP. °C	VIS	NO.	5.05	CIAL							
							COLOR	TRANS DIR.	SPEED OR FORCE	(mbs)		WET	CODE	DBS. DEPTHS		ATIONS							
								10	+	224		186		14									
[	essenge ]							1	10.	1 2 2		<del></del>		1 -			1 40						
Į.	TIME 07	ND,	CARD	DEPT	H [m]	,	·c	s */	SIGA	T-AN	SPECIFIC VOLU	0,71	X 10 <sup>3</sup>	VELC	CITA	D2 m1/1	PO4-1		TA (→P) - 01/1	NO2-N µg - 01/1	ND3-N pg - al/l	51 Da-5	
			c T	.	0.0	1,	705	2643			003422		000	1	. 7.0						ļ	1	1
	126		STI				785	3641	264		001628	9 (	000										
	125		OBS	00			785	36412			001/03	2 0	014	15									
			STI				785	3641 3641	264 264		001633		016										
	125		511				786 786				0010.10	> 0	1033										
	125		ORS	00			786	36411 3641	264 264		001642	2 0	049		182								
			511				787	3642	26		001648		082										
	125		085	00			787	36415			001040	0 0	002		186								
	125		085	00			78 <b>7</b>	36414							190								
	125		STI				787	3641	26		001658	2 0	123										
	125		085	00			788	36419			001000	2 0	123	15									
	120		STI				788	3642	26		001665	6 0	165		195								
			ST	_		_	788	3642	26	_	001673		207		199								
	125		0BS	01			788	36420			001013	, ,	,201		203								
	120		ST	_			788	3642	26		001682	4 ^	249										
	125		OBS	01			790	36414			001001				211								
	120		STI				790	3641	26		001709	9 (	333		212								
			571				779	3636	26		001738	-	420		216								
			ST				747	3631	26		001716	9 0	506										
	125		OBS	T03	98	1	626	36207	26	63				15	193								
			ST	0 04	00		622	3620	26	64	001540	6 0	669		192								
	125		085	04	95	1	428	35854	26	0.8				15	143								
			STI	05	00	1	419	3584	26	81	001389	7 0	815	15	140								
	125		OBS	T 05	92	1	230	35569	26	99				150	089								
			ST	06	00	1	202	3554	270	02	001198	7 0	945	150	081								
			S <b>T</b> I	07	00	0	902	3527	27	35	000880	6 1	049	149	986								
	125		OBS	07			712	35113	27	51				149	927								
			ST				<b>7</b> 07	3511	27		000706		128		926								
			ST				644	3511	27		000631	8 ]	195		918								
	125		OBS	T09	-		590	35106							912								
			S T				584	3510	27		000566		.255		911								
			ST				526	3506	27		000528		310		903								
			ST				480	3503	27		000499	4 1	361		901								
	125		OBS	12			465	35016			0001-	_			901								
			ST				446	3500	27		000486		410		903								
			51				425	3499	27		000475	-	458	_	911								
	105		S T				416	3498	27		000477	g ]	506		924								
	125		OBS	T15	υO	D	416	34984	27	78				14	924								

REFERENCE	SHIP	LATITUD	E	LONGITUDE	MAR	SDEN	STATION	TIME	YE	AR	ORISE	STAT		DEP"H	CEPTH	1 0	WAVE SERVATION		CUCES		5	NODC TATION
DE NO.	CODE		1/10	1/10		1.	MO DAY	HP 1	10		NO	NUN	8.6 8	воттом	S'APPL	5 22	es G ef PER	EX CODI	FEPT A V		N	LIMBER
311203	HU	3505	N I	04800 ₩	113	58	01 28	142	19	849	E08 02	20		4078	15	09	3 2	×1	7 6			0020
						WA		WIND		BARC		-	vis	NO.	SPE	ECIAL	1					
						COLOR	TRANS D	R. C	EED PE   PEE	4A ET E (mbs			ET COD	DEPTHS	OBSERY	VATION!	i					
							1	_+_	-	163	3 193	11	90 7	14								
	MESSENGI	CAST	CARD	DEPTH Imi		Ψ.	5	ή,	IG N A	,	SPECIFIC VOL	UME	≨ _ D DYN M	502	UND	Işm'	PO4-P	TOTAL-P	NO1-N	hOj=N	5104-5	рн
	TIME HR 1/10	\$ NO.	1498	DEFIN IN	ļ		ļ.,		110 1 7	-	ANOMALY	110	x 3 <sup>1</sup>	VE.C	CCITE		13 - 01 1	+ g - al l	ν οι :	19-011	FB - 01/1	
	-	1	STI	D 0000	١,	766	3635	1	641		001628	4.8	0000	15	171							
	142	)	OBS	0000	_	766	3635		641		001021	, .	0000	_	171							
	14,	-	STI		_	767	3635		640		001635	5.0	0016		173							
			5 T			768	3635		640		00164		0033	-	175							
	142	,	085		_	769	3625		640			_	,		176							
	174	-	5 T			769	3635		640		001646	, 0	0049		177							
			ST			769	3635		640		00165		0082		180							
	142	,	OBS		-	769	3635		640						180							
	140	-	ST			770	3635		640		001664	+ 7	0124		185							
	143	,	OBS	0076		770	3635		640						185							
	14.	-	STI			770	3635		640		00167	26	0165		189							
	147	,	085		_	770	3635		640						189							
		-	ST		_	775	3637		640		001678	34	0207		194							
			ST			780	3639		640		001684		0249		200							
	14		OBS			780	3639		641						201							
		_	ST			791	3643		641		00169	7.1	0334	15	212							
	14	,	OBS			792	3643		641						213							
		-	ST			759	3639		645		00166	9.7	0418		211							
			ST			708	3632	_	652		00151		0500		203							
			\$T		_	557	3609		2670		00147		0655		171							
	14	,	085			548	3607		2671					15	168							
	•		ST			338	3573		2690		00130.	26	0794		112							
	14	2	OBS			323	3570		269					15	108							
		-	ST			120	3543		2709		00112	44	0915	15	051							
	14.	?	OBS			102	3540	8 2	71	1				15	046							
	-		ST			911	3528		2734		00088	83	1016	14	990							
			ST	-		754	3519		275		00072	80	1096	14	946							
	14	,	OBS			739	3518		275					14	942							
		_	ST			682	3518		276		00063	33	1164	14	934							
			ST		0	619	3518		2769	9	00055	79	1223	3 14	926							
	14	>	OBS			605	3517		277		_		-	14	924							
	• •	_	ST			546	3512		2774		00051	18	1277		912							
			ST			485	3505		277		00049		1327		903							
	14.	2	OBS			453	3501		277	-					901							
	- *	_	ST			441	3502		2771		00046	80	1375		901							
			ST			413	3500		2779		00045		1421		906							
			51			402	3499		2779		00045		146		918							
	14	2	OBS			402	3498		277				-	_	922							

REFERENCE SHIP		2.5	MARSDEN	STATION TIN		ORIGINATI		DEPTH	MAX. OEPTH	ORSE	WAVE RVATIONS	WEA-	CLDUD		N	ODC
CTRY IO. COOF LATE		NGITUDE TO	SQUARE		YEAR	NO. NU		BOTTOM	0.6		HGT PER SE	CODE	TIPE AMT		NI NI	IMBER .
	1/10	17101	10" 1"	MO DAY HR		+			1	1	-		1			
311203 HU 350	3 N 04	809 W			37 1968			2761	18	11	3 4	X2	7 6		0	021
			WA	, , ,	NO BAR		VIS			CIAL						
			COLOR	TRANS. DIR.	SPEED MET		VET COD	DEPTHS	OBSERV	ATIONS						
			CODE		70401		59 7	14								
				11	516 15	2 104 11	79 /	14			_	_				
MISSENGE CAST	CARO	DEPTH (m)	r tc	s */	SIGMA-T	SPECIFIC VOLUME	₹ △ D	SO	JND	0 2 ml/1	PO4-P	TOTAL-P	NO2-N	NO3-N	51 04-51	рН
HR 1/10 T ND.	TYPE	DEFIN ON	' "	' "	30MA-1	ANOMALY-X107	x 10 <sup>3</sup>	VEL	OCITY		ug = 01/1	µg - α1/1	μg - αt/l	μg - al/l i	μg - a1/l	,
	1															
1	STD	0000	1768	3636	2641	0016240	0000	15	172 '		1	1	'			
137	OBS	0000	1768	36364	2641			15	172							
	STD	0010	1769	3636	2641	0016327	0016	5 15	174							
	STD	0020	1770	3636	2640	0016385	0033	3 15	176							
137	OBS	0027	1771	36359	2640			15	177							
	STD	0030	1771	3636	2640	0016453	0049	9 15	178							
	STD	0050	1772	3636	2640	0016533	0082	2 15	181							
137	OBS	0053	1772	36360	2640				182							
	SID	0075	1772	3636	2640	0016607	0123		185							
137	OBS	0080	1772	36362	2640				186							
	STD	0100	1772	3636	2640	0016686	0169		190							
137	OBS	0109	1772	36363	2640	0014700			191							
	STD	0125	1770	3636	2641	0016732	020		193							
	STD	0150	1769	3636	2641	0016816	0249		197							
137	OBS	0165	1768	36358 3645	2641 2648	0016304	0332		199 206							
127	STD OBS	0200 10220	1768 1768	36479	2650	0016304	0334		209							
137	STD	0250	1767	3646	2649	0016379	0413		214							
	STD	0300	1744	3640	2650	0016441	0495		215							
	STO	0400	1615	3617	2663	0015466	0655		190							
137	OBS	T0446	1518	36021	2674			15	165							
	STD	0500	1351	3576	2689	0013073	0798	8 15	117							
137	OBS	0556	1191	35532	2704				069							
	STD	0600	1071	3538	2714	0010715	091		033							
137	OBS	T0667	0917	35208	2727			_	986							
	STD	0700	0874	3521	2734	0008821	1014		975							
	STD	0800	0757	3519	2751	0007225	1094	_	947							
	STD	0900	0655	3518	2765	0005935	1160		923							
137	OBS	0907	0649	35182	2765	0005205			922							
	STD	1000	0570	3511	2770	0005398	121		905 893							
127	STD	1100 1150	0502 0476	3505 35032	2773 2775	0005030	120		891							
137	OBS STD	1200	0466	35032	2776	0004807	131		895							
	STD	1300	0446	3501	2777	0004792	1366		903							
	STD	1400	0429	3500	2778	0004739	1414		913							
137	OBS	1464	0418	34999	2779	1 ) /			919							
• • • • • • • • • • • • • • • • • • • •	STD	1500	0412	3500	2779	0004629	146	_	923							
	STD	1750	0379	3498	2781	0004539	157		951							
137	OBS	T1788	0375	34976	2781			14	955							

REFERENCE CTRY ID.	SHIP CODE	LATITUE	DE	LONGITUDE	DRUFT	sou	ARE	- 1	ION T		YE ▲ R	CPUIS		STATIC	N	DEPTH TO BOTTOM	DEPT	H 01	WAVE SERVATIO		THER CODE	0009	-	5	NODC TATION   UMBER	)
+	-	•	1/10	10.1		10	1.	MD				NO.	+	8 M U M	-		,	1	HOT PER	SEA	-	1				
311203	B  HU	3513	N	04738 V	4 1	113	57 V. A			185 ]	1968		B 02			2305 NO.	18	_	4   9	1	X 1	P 4			0022	
								TEANS.	+	SPEED OR FORCE	M ET (mb	ER	Dat	₩ E	T CODE	CAF		ECIAL VATIONS	,							
								-	12	516	0.5	1	194	18	8 7	14			-							
	MESSENGI TIME HR 1/10		CAPI		(m)	1	٤.	5	٠	SIGA	T - A	SPECIF	MALT-1	JM E 107	₹ ∆ D DYN M. x 10 <sup>3</sup>	SDL VELC	DCITY	O <sub>2</sub> ml	/1 PO		07AP	%O;=6	1, 3, ±1, 2g + 0	1 10 - 24		
													1					1				ı				
			ST	_			749	362		26:		00.	1644	5	000		165									
	189	>	OBS				749		275	261 261		00	1650	6	0016		165 167									
			S T S T	-			75∩ 751	36; 36;		26:			1650 1656		0033		169									
	189	5	085				752		275	261		00	.070	)			171									
	10.	_	51				752	36;		261		00	1661	8	0050											
	189	5	085				751		274	261			1		- 5.0		173									
			ST				751	36		26		00	1666	7	0083		174									
			ST				752	36	28	26	19	00	1673	3	0125	15	179									
	18	5	085				752		281	26	39						179									
			ST		0.0	1	753	362	29	26:	39	0.0	1679	13	0167	15	183									
	185	5	085	010	8	1	754	36	290	26	39					15	185									
			ST	D 013	25	1	756	360	30	26:	3.9	0.0	1685	Q	0209	15	188									
			ST	D 019	50	1	759	36	31	26	39	00	1692	4	0251	15	193									
	189	5	0 <del>8</del> S	016	51	1	760	36	317	26	¥0						195									
			ST				75]	36		264		00	1633	9	0334		200									
	189	5	085			-	744		408	26							201									
			SI				703	36:		26			1589		0415		193									
			S T				635	36		26			1540	_	0493		180									
		_	5 T			_	477	35		26		0.0	1425	2	0641		143									
	189	5	OBS				407		813	26		0.0	1 2 7 6		0774		126									
	101	_	ST			_	290	356		269	_	UU	1279	1	0776		095									
	189	5	085				176 039	35	473	270		0.0	1065		0894		063 020									
	189		S T OB S				898		31 164	27		00	1005	) )	0094		977									
	10	9	5.1				852	35		27		00	0876		0991		966									
			ST				748	35		27			0730		1071	_	943									
			5 T	-			657	35		27			0609		1138		924									
	18	5	OBS				651		165	27					1130	_	923									
	10.		ST				579	35		27	-	0.0	0545	Ω	1196	_	909									
			S T				515	351		27			0505		1248		899									
	18	5	088				488	-	049	27							896									
	_		5 T			0	467	351	03	27	76	0.0	0482	0	1298	14	896									
			s T	D 131	0.0	0	431	351	00	27	77	00	0466	7	1345		897									
	18	5	OBS	13	79	0	408		978	27							900									
			5 T				406	34	-	27			0460		1391		903									
			ST				398	34		27			0460		1437		917									
			SI				378	34		27		00	0459	96	1552		950									
	18	5	083	T17	57	0	377	34	970	27	81					14	953									

ICE	SHIP	LATIT	UDE .	LON	4GITU OE	DEIFT	MAR	SDEN ARE	STAT	ION TIM		YEAR	CRU	-	RIGINA	TOR'S	$\overline{}$	DEPTH 10	DEPTI		WAVE SERVATIONS	WEA	C008			NODC STATION
10.	CODE		1/10		1/10	^ z	10"	1 1.	MOI	DAY HR.	1/10		N			MBER	- 1	40110A	A STAPL	S DIR.	HGT PER SE	_ coo	E TYPE AN	7		NUMBER
000		252/		0.6	800 W		113	58		1 12		968	50	8	023		1,	4389	16	10	3 5	X 1	4 5			0023
03	HU	3520	) N	04	800 W	1 1	113	WA		VI JIZ		T			R TEMI	P Y			1 10	10	וכוכו	1 ^1	1 4 15	1	ι	0023
								COLOR	T	† T	SPEED	MET		01	_	WET	VIS	NO.	50	ECIAL						
								CODE	Imi	DIR.	FORCE	(mb		BU		BULB	CODE	DEPTH	GRZEK	VATIONS						
										1	517	58	0	18	0	183	7	14	<b>†</b>		i					
			T			_		L	1	22	011	150	<del>-1</del>	10	, ,		1	14	<del>!</del>				1	Τ.	1	_
	MESSENG	CAST	CA		DEPTH I	m)	T	*c	5	.4.	SIGM	A -1			VOLUM	! 2	A. D.		UND	02 ml/	PO 4-P	TOTAL-		NO3-N		
	HR 1/10		TY	PE													10 <sup>3</sup>	VEL	OCITY		µg - a1/1	ا/اه - وبر	μg - at/l	yg - a1/I	µ0 - 01	"
																								ĺ		
	1	1	' s	Tρ	0000	)	1	755	363	33	264	2	00	16	156	0.0	000	15	168		,			•		
	12	6	ОВ		0000	)		755	363		264								168							
			S	TD	0010	)	1	755	361	3.3	264	2	0.0	16	199	0	016	15	170							
				TD	0020	)		756	363	33	264		0.0	16	243	0	032	15	171							
	12	6	OB	S	0026	5	1	756	36:	334	264	2						15	172							
	_		S	TO	0030	)	1	756	36:	33	264	2	00	16	306	0	049	15	173							
			S	TD	0050	)	1	755	363	3 3	264	2	0.0	16	356	0	180	15	176							
	12	6	OB	S	0051	l	1	755	36	328	264	2						15	176							
			S	TD	0075	5	1	755	36	33	264	1	0.0	16	478	0	122	15	180							
	12	6	08	S	0077	7	1	755	361	325	264	1						15	180							
			5	TD	0100	)	1	754	36	32	264	1	00	16	564	0	164	15	184							
	12	6	08	S	0102	2	1	754	36	322	264	1						15	194							
			5	TD	0125	5	1	760	36	34	264	1	0.0	16	657	0	205	15	190							
			S	Tρ	0150	)	1	767	36:	36	264	1	00	16	750	0	247	15	196							
	12	6	OB		0152			767		367	264								197							
				TD	0200		1	767	364		264		00	16	208	0	329		206							
	12	6	08		T0203			766		461	264								206							
				TD	0250			716	36:		265				900		410		198							
				1D	0300			652	36		266				475	-	488		185							
				1 D	0400			492	35		267		0.0	) 1 4	210	0	637		149							
	12	6	OB		T0414			466		924	267								142							
				ΤD	0500			291	35		269		00	) 1 2	666	0	771		096							
	12	6	OB		0516			253		594	269								085							
				TD	0600			015	35		271		U	)10	)3 <b>7</b> 9	0	886		011							
	12	6	OB		10620			968		237	272		0.0		= .				997							
				TD	0700			864	35.		273				475		980		972							
				TD	0800			748	35.		275		U	JU 6	970	1	058		944							
	12	6	OB		083			709		196	275		0.0						934			•	•			
				TD	0900			646	35		276				973		122		920							
		,		TO	1000			563	35		277		U	,0:	374	1	179		902							
	12	6	08		T1060			523		073	277		0.0	20.0	011		221		896							
				TD	1100			506	350		277				011		231		895							
				TD	1200			468 437	350 350		277				833 746		280		896							
	1.2	,		TO.	1300						277		00	J U 4	146	1	328		899							
	12	О	OB		1326			430	34	996	277		0.0	٠٠,	. 473	,	276		901							
			_	TD	1400 1500			413 395	34		2 <b>7</b> 7				∙673 ∙601		375 422		915							
	12		0B	TD				384		91 967	278		0(	, () 4	*001	1	422	_								
	12	0	OB	5	T1598	>	U	040 د	54	70/	218	U						14	927							

Table III.—Observed and interpolated oceanographic data for stations taken by USCGC ESCANABA at Ocean Station ECHO, 29 February-19 March 1968, prepared from NODC listing No. 31-1240

ENCE	SHIP	LATITU	ine Lo	DOME BOULDING	MAR			ION TI	ME	YEAR	L	ORIGIN			DEF	TH O	MAX.	08	WAVE SERVATIONS	W.E.		CLOUD		Π.	NODC TATION	
10. NO.	COOF	•	1/10	1/10	10°	170		DAY H	P 1/10	15.00	CRUIS NO.		TATI		8011		S'ANPL"	+	THGT PER S	- 60	Dr.	TIPE TANT			UMBIS	
	5.1	2501			1	1 1						+				. 7			+		-	-	-			
1240	EN	3501	UN   U	47420W	113	غصمتكم				1968	I EU	9 00		-	42		13	18	2 3	X	1	2 6			0001	
						WA		-	SPEED	BAR		DRY		VI				CIAL								
						COLOR	TRANS	DIR.	FORCE	M ET		BULB	BU BU		DEP		OBSERV	ARONS								
							† <del></del>	19	515	16	3	144	1 2	39 7	14	,										
		_		1	_		-	1 2	317	10	3	144	4 -		-	• 1				ī.	_	- T			1	$\overline{}$
	MESSENGI TIME	CAST NO.	CARO	OEPTH (m)	т	$\mathcal{C}$	s	٠/	SIGA	7-AA		HALY-ET		DYN.	à	SOU	CITY	02 m1	PO 4~P	TOTAL		NO2-N	NO3-N	SI O4-5	рН	S C
	HR 1/10	1					<u> </u>						_	x 10		ASTO	(0111		μg = 01/I	νg • ο)	/ '	rg - of 1	μg - 61 l .	μg - ο1/1		c
			STD	0000	1	746	363	35	264	46	00	1580	9	000	) :	151	65									
	12	7	OBS	0000	1	746	36:	353	264	46						151	165									
			STD	0010		746	36:		264			1586		001			167									
			SID	0020		746	36:		264		00	1589	9	003			169									
	12	7	OBS	0022	_	746		349	264								169									
		_	STD	0030		746	36		264		00	1599	9	004			170									
	12	7	OBS	0049		745	36:		264								173									
		-	STD	0050		745	36		264		00.	1605	4	008			173									
	12	1	OBS	0067 0075	_	746 745	36: 36:		264	-	00	1612		012			176									
	12	7	STD OBS	0079		742	361		264		00.	1012	9	012			177 179									
	12	•	STO	0100		734	361	-	26		00	1595	2	016			178									
			STD	0125	-	720	36		26			1569	_	020			178									
	12	7	OBS	0133		716		346	26				•	0 2. 0			178									
			STD	0150		714	363		26		00	1560	1	023			181									
	12	7	OBS	T0180		704	363		26					- 20			182									
			STD	0200	1	685	36	31	26	57	00	1539.	2	031	5	151	180									
			STD	0250	1	634	36	20	266	51	00	1519	6	039	3	151	171									
			STD	0300	1	575	360	9	266	56	0.0	1483	9	046	3 :	151	160									
	12	7	OBS	T0353	1	506	35	976	26	73						151	146									
			STD	0400		436	358		268		00	1374	8	061			130									
	12	7	085	0440		376		786	26								116									
		_	STD	0500		289	356		269		00	1248	0	074			95									
	12	7	OBS	T0522		252		528	269								986									
	10		STD	0600		056	35		27		00.	1044	6	085			27									
	12	,	OBS STD	0694 0700		860 849	35: 35:		2 <b>7</b> 3		001	0874		006			968									
			STO	0800		690	35(		27			0 <b>705</b> :		095			965 919									
	12	,	OBS	T0853		626		046	27		000	0705	9	103			902									
	12	•	STD	0900		626 593	350		27		001	0605	4	109			397									
			STD	1000		534	35		27			0537		115			390									
	12	7	OBS	1065		503		046	27		000	0 ,51.	,	110			388									
	• •	•	STD	1100		489	350	_	27		0.00	0488	6	120			888									
			STD	1200		458	350		27			0459		125			392									
	12	7	OBS	T1284		443		044	27		- 5	,	-	123			900									
	12	•	000	, 1204	0	770	)),	~~	211	U V						1 → :	, 00									

NOD STATE NUM			CLOUD CODES	WEA- THER CODE	١.	WAVE ERVATIONS HGT PER SE	OBSE	DEPTH OF S'MPL'S	TO TO OTTOM		ATION UMBER		RUISE NO.	EAR	Y	(1)	STATION IGMT		SQUAR	+ +	NGITUDE		1/10	LATITU	SHIP	ID. NO.
00			8 5	X1		2 4	27	19				002	_	968		13			113 5		820 W	04	N	3503	EN	240
,	,						2 N C	SPECIA: OBSERVA TI	NO. OBS. EPTHS	vis cone	P. °C WET BULB	ORY ULB		BARO- METER (mbs)	PEED	4	-+	DR 1	CC							
							-		14	7	156	78		183	12	_	30	-								
	,								14	1					12	13		+					CAR		ESSENGR	A.
	SIO4- 9 - 9ע	NO1-N	0 - al/l			PO4~P µg = 01/1	ml/l		VELO 200	△ D. N. M. 10 <sup>3</sup>	) S	ACY-XIO	ANOM.	-1 2	SIGMA		s ·4.		1 %	(m)	DEFTH		TYP	NO.	TIME OF	
											1.						24.25	,	170	0	000	TD	51			ĺ
									151	000	0.0	5615	001		2648		3635 36351		173 173		000		085		133	
									151		- 01	5613	2011		2648 2648		3635		173		001	_	ST		• > >	
									151	16		5605			2649		3635		173		002		51			
									151	131 147		5602			2649		3635		173		003		ST			
									151 151		00	0002			2649		36352		173		003	ŝ	085		133	
									151	78	0.0	5640	0019		2649		3635		173	0	005	ſΟ	51			
									151			,040			2650		36352		173	4	006	5	OBS		133	
									151	17	0.1	5702	001		2650		3635		173	5	007	O I	ST			
									151	• '					2650		36354	. :	173	6	009	5	085		133	
									151	57	0.1	5779	0015	) (	2650		3636	:	173	0	0100	D	ST			
									151	96		784			2651		3636	3 :	172	5	0129	D	ST			
									151						2651		16160	3 :	172		0129		OBS		123	
									151	35	02	631	015	(	2653	2	3633	) :	170		0150		ST			
								74	151						2657		36268		167		0193		OBS		133	
								74	151	13	03	390			2657		626		166		0200		ST			
								70	151	89	0.3	151	0015		2661		3620		163		0250	_	51		122	
									151						2662		6189		162		T025		OBS		133	
									151		04	611			2668		607		155		0300		ST			
									151		06	1250			2685		3579		138		0500		ST			
									150	27	0.7	483	011		2705		1552 15480		118 115		T0513		OBS		133	
									150				000		2707 2 <b>7</b> 25		1522		093		0600		ST		•	
									149	32	0.8	1539	009		733		5138		084		0642		OBS		133	
									149 149	17	09	591	007		745		508		073		0700		ST			
									148	1,	0 4	771	007		755		5024		063		T0770		OBS		133	
									148	Ω7	09	334	006		758		502		060		0800		ST			
									148		10		005		765		501	_	054	)	0900	D	ST			
									148		11	138			771		500		049	)	1000	D	ST			
									148	•					772		4999	3	0478	3	1028		085		133	
									148	51	11	773	004	0	775	2	499	3	044	)	1100		ST			
									148		11	549	004	0	777	2	498	3	0418	)	1200		ST			
									148						778	2	4969		0399		1284		OBS		133	
									148	42	12	460	004	0	779	2	497	3	0391		1300		ST			
									148		12	512	004	0	779	2	497		0399		1400	_	ST			
								14	149	32	13	562	004	0	779	2	497	3	0392		1500		ST			
									1493						780		4976	_	0389		1606		OBS		133	
									1499	48	14	669	004	0	780		498		038		1750		ST		122	
								34	1498						780	2	4975	3	0386		T1928		OBS		133	

CTRY ID.	SHIP	LATITUDE	LONGITUDE		STATION TI	YE AR		ATION	DEPTH TO BOTTOM	MAX DEPTH OF		WAVE ERVATIONS	WEA- THER CODE	CODES		5	NDDC STATION NUMBER
- +		1/10	71/10	10. 1.	MD DAY H	-	+	UMBER		S'MPL'S	DIR	HGT PER SE	1	TYPE A.M	1	-	
311240	PEN	34590N	047560W	113 47	03 03 0		1		4755	13	23	2  3	X1	8 1			0003
				<u> </u>	TRANS. DIR	SPEED MET OR (mb:	ER DRY	WET COC	DEPTHS	SPEC OBSERV							
					24	522 82		156 7	14								
	MESSENGE TIME HR 1/10	CAST CAR		7 %	5 */4.	SIGMA-T	SPECIFIC VOLUM		A. 1000		D2 mi/l	PO4-P ug = at/l	101AL-P 49 - at/1	NO2-N µ0 - 01/1	NO3~N NO3~N	\$1 04-51 ug - a1/1	
																_	
		ST		1795	3644	2641	0016299	0000									
	064			1795	36443	2641			151								
		ST		1796	3644	2641	0016346										
	061	ST		1796	3644	2640	0016390	0033									
	064	085 51		1796 1796	36443	2640	001674	00:0	151								
	064		_	1795	3644 36437	2640 2640	0016449	0049									
	064			1795	3644		001451		151								
	064		_	1795	36439	2640	0016517	0082									
	004	. 063 51		1795	3644	2640 2640	0016583	0123	151 151								
	064	_		1794	36449	2641	0016363	012:	151								
	00-	51		1794	3646	2642	0016505	0165									
		51	-	1795	3648	2644	0016461										
	064			1795	36485	2644	0010461	. 0206	152								
		ST	_	1785	3647	2645	0016388	0247									
	064	_		1769	36454	2648	0010300	027	152								
		ST		1754	3643	2649	0016146	0328									
		ST		1721	3636	2653	0015994										
		ST		1688	3630	2656	0015848										
	064			1657	36244	2659			151								
		ST		1554	3606	2669	0014909	0642									
	064			1496	35962	2674			151								
		ST		1346	3572	2687	0013261	0783									
	064	OBS	70510	1324	35690	2690			151								
		ST	D 0600	1107	3542	2711	0011078	0905									
	064	OBS		0952	35254	2725			150	00							
		ST		0883	3520	2732	0009009	1005	149	78							
		ST		0692	3507	2751	0007155	1086	149	20							
		OBS		0641	35039	2755			149	05							
	064			0569	3503	2764	0005820	1151	148	87							
	064	ST	-				0001000	1200	148	71							
		ST	D 1000	0489	3503	2773	0004928	1205	140	/ 1							
	064	ST OBS	D 1000 1056	0489 0460	35020	2776			148	68							
		ST OBS ST	D 1000 1056 D 1100	0489 0460 0459	35020 3502	2776 2776	0004668	1252	148 148	68							
		ST OBS ST ST	D 1000 1056 D 1100 D 1200	0489 0460	35020	2776		1252	148 148	68 75							

TRY ID.	SHIP	LATITUD	E 10	NGITUDE 1	MARSDEN	STATION TI	ME		2*ROTAR		DEFTH	DEPTH	08	WA:	VE ATIONS	WEA	CLOU			NDDC
	CODE		1/10	1/10	10. 1.	MO DAY H		NO.	STATION		BOTTOM	S'MPL"	1		PER SEA	0000				UMBER
311240	EN 3	34526	N 04	8030W	113 48	03 03 1	182 1968	E09 00	) 4		5011	13	26			×1	-			0004
					WA	TER V	VIND BAR	A IR TE	MP. C	VIS	ND.	< mc	CIAL	٦, .						
					CDLO	TRANS DIR.	SPEED METI OR (mb)	R DRY	WET	COD	OBS. DEPTHS		ATIONS							
						23	508 16		156	5 7	14			1						
	MESSENGA DE	CAST	CARD	DEPTH (m)	7 %	s ·4.	SIGMA-T	SPECIFIC VOL		₹ ∆ D		UND	D <sub>2</sub> ml/	, P	O4-P	TOTAL-P	ND2-N	ND3-N	SI D4-5	
<u>.</u>	HR 1/10	NO.	TYPE			ļ · · · ·	1	ANOMALY-	10	x 10 <sup>3</sup>	VELC	CCITY		100	01/1	μg = e1/l	yg - 01/	yg - 01/1	µg - a1/1	рн
1		1	STD	0000	1769	3640	2644	001600	10	0000	15	173					1			
	202		OBS	0000	1769	36399	2644	001000	, ,			173								
	202		STD	0010	1764	3640	2645	001594	2 (	0016		173								
			STD	0020	1761	3640	2645	001591		0032		174								
	202		OBS	0023	1760	36395	2646	UU 1 3 7 1				174								
	202		STD	0030	1759	3640	2646	001590	19 /	0048		175								
	202		085	0047	1757	36396	2646	001770	, , ,	, , , ,		177								
	202		STD	0050	1757	3640	2646	001592	4 6	080		177								
	202		OBS	0070	1756	36397	2647	001772	(	7000		180								
	202		STD	0075	1756	3640	2647	001597	70 (	0120		181								
	202		085	0092	1756	36399	2647	001371	, ,	7120		184								
	202		STD	0100	1756	3640	2647	001603	A (	0160		185								
			STD	0125	1755	3640	2647	001608		200		189								
	202		OBS	0139	1755	36406	2648	001000	, ,	J Z O O		191								
	202		STD	0150	1743	3638	2649	001605	. 5 /	0240		189								
	202		OBS	T0185	1705	36322	2653	00100	, ,	J Z 4 0		183								
	202		STD	0200	1701	3632	2654	001568		0319	_	184								
			STD	0250	1677	3629	2658	001551		3397		185								
			STD	0300	1634	3623	2663	001514		3474		180								
	202		OBS	T0364	1553	36092	2671	V0131-	,	J <b>-</b> 1-		164								
	202		STD	0400	1486	3597	2677	001408	12 (	0620		147								
	202		085	0453	1391	35807	2685	001400	, ,	0020		123								
	202		STD	0500	1318	3570	2692	001284	. 1	755		105								
	202		065	0539	1250	35610	2698	001204	, ,	,,,,		088								
	202		STD	0600	1099	3541	2712	001100		0874		043								
			STO	0700	0893	3520	2731	000916		) 9 <b>7</b> 5		982								
	202		OBS	0711	0873	35180	2732	000710	, , ,	,,,,		976								
	202		STD	0800	0742	3515	2750	000731	8	1057		941								
	202		OBS	T0883	0646	35130	2762	000131		1001		916								
	202		STD	0900	0636	3513	2763	000604		1124		915								
			STD	1000	0575	3510	2768	000553		1182		907								
			STD	1100	0514	3507	2774	000504		1235		907 898								
	202		085	1101	0513	35069	2774	00000		1633		898								
	202		STD	1200	0470	3504	2776	000478	7	1284		897								
			STD	1300	0470	3501	2777	000478		1331		900								
	202		OBS	71323	0439	35005	2778	000469	, ,	1001		900								

REFERENC	- CODE	LA TIT	UDE LO	NGITUDE HISTORY	MARS SQU	ARE	STATION (GMT	1	YEAR		ATOR'S TATION UMBER		DEPTH TO BOTTOM	DEPTH OF S'MPL	085	WAVE ERVATIONS HGT PER S	CODE	CODES		\$1	IDDC ATION UMBER
31124	+0 EN	352	65N 04	7423W	113	57	03 04	123	1968	E09 009	;		4480	01	23	2 3	×1	2 3			0005
			. ,		. [	COLOR	TRANS. DIR	WIND	141616	R DRY	WET	CODE	NO. OBS. DEPTHS		CIAL /ATIONS					•	
						CODE	23	FORC	<del></del>		128	7	07								
	MESSENG TIME HR 1/1	CAST	CARD TYPE	DEPTH (m)	T	°C	s ·/	sic	MA-I	SPECIFIC VOLUM	POY	△ D N. M 10 <sup>3</sup>		DCITY	D2 ml/1	PD 4-P µg + 01/1	TOTAL-P pg = qt/1		ND3-N 99 - 01/1	\$1 04-\$1 ug - 01/1	рН
		1	510	0000	1	738	3637	26	49	001547	,   ,   0.0	000	151	163							
	12	3	OBS	0000		738	36374		49	001,		, , ,		163							
			STD	0010		737	3637		49	0015511	0.0	15		165							
			STD	0020		737	3637	26	49	0015545	00	31	15	166							
	12	3	OBS	0021	1	737	36370	26	49				15	166							
			STD	0030	1	737	3637	26	49	0015598	3 00	46	15	168							
	12	3	OBS	0040	1	737	36366	26	49				15	169							
			STD	0050	1	737	3637	26	49	0015684	+ 00	77	15	171							
	12	3	OBS	0058	1	737	36366	26	49				15	172							
			STD	0075	1	735	3636	26	49	0015742	2 01	117	15	175							
	12	3	OBS	0075	1	735	36363	26	49				15	175							
			STD	0100	1	737	3636	26	49	0015854	• 01	156	15:	179							
	12	3	OBS	0110	1	737	36364	26	49				15	181							
			STD	0125	1	738	3636	26	49	0015966	0 1	196	15	184							
	12	3	OBS	T0148	1	738	36364	26	49				15	187							

D. D.	SHIP	LATITU	DE 1	ONGITUDE		SDEN JARE		N TIA MT)	YEAR			ATION UMBER	7	TO DITOM	MAX DEPEN OF S'MPL'S		WAVI SERVAT		TH CO	ER C	00E		1,5	NODC TATION NUMBER
40	EN	35000	ON C	47560W	113	57	03 0	5 1	29 196	8 E09	006		4	572	09	26	3 5	5	Х	1 8	7		1	0006
[					1	+	TER		ND I		A IR TEM		-	NO.		-	1		1					
						COLO	RTRANS	DIR.		TER	DRY.	WET C	one l	DBS.	OBSERV	CIAL ATIONS								
						CODE	(m)	J	FORCE IT	ba) B	ULB	BULB	D	DEPTHS.										
						1		19	515 1	12   1	78	144	7	14										
	MESSENGE TIME HR 1/10	or NO.	C ARD TYPE	DEPTH IN	n) '	r 10	5 •	4.	SIGMA-T		WULUW OIK-YJA		M.	VELO	CITY	D2 ml/		4-9	TOTAL:		12=N - at-	NO3=N v2 - 01/1	\$1 O4-\$1 µg - a1'1	
							j					ĺ												
,		. ,	STO	0000	) 1	746	364	0	2649	001	5467	000	0	151	166		,							
	129	9	OBS	0000	1	746	364	00	2649					151	166									
			STC			748	364		2649	001	5548	10:	16	151	168									
		_	STD			749	364		2648	001	5627	00:	3 1	151										
	129	9	OBS	0020		749	363		2648				_	151										
		-	STO		-	749	364		2648	001	5662	004	17	151										
	129	9	OBS	0038		749	3639		2648	001		001		151										
	129		STD 085	0050 0056		.749 .749	363°		2648 2648	001	5766	00.	8	151 151										
	129		085	0074	_	749	363		2648					151										
	12	•	STE		_	749	363		2648	00.1	5867	01	8	151										
			STO			748	363		2648		5933			15										
	129	9	085	0108		748	363		2648	_				151										
			STD	0125	1	730	363	5	2650	001	5813	019	7	151	181									
	129	9	065	T0138	1	718	363	35	2651					151	180									
			STO	0150		714	363	3	2652		5741		3 7	151										
			STD			695	363	1	2655	001	5650	03	l 5	151	182									
			STC			676	362		2657	001	5559	039	3	15										
	129	9	085	T0263		671	362		2658						185									
		•	SIC			601	361		2664	001	5053	3 04	/ ()		168									
	129		OBS	0316 70376		576 514	360 360		2666 2673						163 152									
	129	7	0BS			465	359		2678	001	3997	06	15		152									
	129	9	085	0489		280	356		2695	551	2791		,		090									
	12	_	STO			259	356		2697	001	2326	074	46		084									
			STO			048	353		2715		0596		-		024									
	129	9	085	T0607		032	353.		2717						019									
			STO			748	351		2752	000	6948	3 094	+9		927									
	129	9	085	0763		632	351	30	2763						891									
			STO	0800	) C	628	351	3	2764	000	5817	10	13	148	896									
			STO	0900	) (	618	351	2	2764	000	5878	3 10.	71	14	908									

REFERENCE		- 2	MARSDEN	STATION TO			ORIGIN	ATOR'S		DEPTH	MAX.		WAVE	WE	Α-	CLOUD	T	T	NODC
	1	NGITUDE E	SOUARE	(GMT)	YE.	A P		STATION		TO BOTTOM	DEPTH	085	ERVATIONS	TH	ER	CODES			TATION
10E NO. COOL	1/10	1/10	10" 1"	MO DAY H		-	NO.	NU MBER	-	BOILOW	S.N br. 2		HGT PER S	EA CO		TYPE AMI			4UMBEP
311240 EN   350	01 N   04	801 W	113 58	03 07 2	10 19	68	E09 00	7		4389	14	26	2 3	×	1	8 6			000
			WAT			BARO-	AIR TE	MP. °C	VIS	NO.	SPEC	IAI							
			COLOR	TRANS DIR.		(mbe)	DRY BULB	W ET BULB	CODE	OBS.	OBSERV								
			10000	$\leftarrow$		-	_	0000	7	1.		-							
			, .	18	515	119	206		_	14				,	_			_	_
MESSENGE CAS		DEPTH (m)	r ℃	5 %.	SIGMA-		PECIFIC VOL	ME DY	△ p N. M	201	DNI	02 ml/l	PO 4 - P	FOTAL-		NO2+N	NO3-N	5104-5	рн
HR 1/10 NC	. TYPE			' ''		.	ANOMALY-X	X X	103	VELO	CITY	0,	μg - σt"1	≥g - at	4 1	ug + at/ l	µg - ah l	99 - ot/	1 1
,	STD	0000	1744	3637	2648		001563	9 00	00	15	165		'			,			,
210	OBS	0000	1744	36370	2648					15	165								
	STO	0010	1745	3637	2647	-	001570	3 00	16	15	167								
	STD	0020	1747	3637	2647		001576	5 00	31	15	169								
210	obs	0024	1747	36370	2647						170								
	STD	0030	1745	3637	2647		001576	5 00	147		170								
210	OBS	0048	1740	36366	2648						172								
	STD	0050	1740	3637	2648		001574	7 00	179		172								
210	085	0073	1740	36368	2648						176								
	STO	0075	1740	3637	2648		001581	7 01	18										
210	OBS	0098	1738	36369	2649		00150.				179								
	STD	0100	1738	3637	2649		001584		58		180								
210	STD	0125	1732	3637	2650	1	001582	3 01	97		182								
210	OBS	0149	1726	36362	2651		001500				184								
210	STD OBS	0150 <b>T019</b> 9	1726	3636 36340	2651		001580	5 02	37		184								
210	5 <b>7</b> D	0200	1715 1715	3634	2652 2652		001586		16		189 189								
	STD	0250	1685	3628	2655		001577		195		187								
	STD	0300	1639	3620	2660		001547		73		181								
210	OBS	T0390	1514	35994	2672		001347	0 04	113		154								
210	STD	0400	1497	3596	2674		001439	0 06	23		150								
210	OBS	0486	1322	35689	2690		00145	0 00	, ,		104								
	STD	0500	1280	3563	2694		001259	3 07	57		092								
210	OBS	10578	1074	35350	2711						030								
	STD	0600	1030	3530	2715		001056	9 08	73		017								
	STD	0700	0853	3515	2733		000888		71		966								
210	OBS	0767	0753	35090	2743						939								
	STD	0800	0709	3510	2751		000718	7 10	51	149	927								
	STD	0900	0601	3513	2767		000555	1 11	15	149	901								
210	0 <b>6</b> \$	0957	0555	35134	2774						892								
	STD	1000	0543	3512	2774		000495		67		894								
	STD	1100	0515	3508	2774	-	000498	6 12	17	148	899								
210	OBS	1197	0487	35049	2775						904								
	STD	1200	0486	3505	2775		000494		66		904								
	STD	1300	0457	3502	2776		000484		15	_	908								
	STD	1400	0427	3500	2778		000472	7 13	63		912								
210	obs	T1434	0417	34989	2778					149	913								

																											_				
REFERENCE	SNIP					DC TB	MARS	DEN	STA	TION T	IME				RIGIN	ATOR'S			DEPTH	DEPTI			WAVE		WEA.	Cron	0		N	ODC	
CODE NO.	C008	LATITU	1/10		1/10	88	10*			DAY h	B 1/10	YEA	'*	CRUISE NO.		TATION			01 0110M	0.0			HGT PER S		THER	CODE			N J	AF BER	
<b></b>	EN	3459		04	759 W	Η,	113				010		c 0					١,	672	1			1	_	v 1	9 5	-		-	000	
311240	EN	3479	N	04	159 W	1	113	WA1			NINO	1		E0 9	IR TEA	_		4	572	16	) .	30	3 3	ì	X 1	9 5			. 0	008	
								COLOR	TRANS	+	SPEE	0 1	AETER		DRY	WET	VIS	nd.	NO. 085.	SP OBSER	ECIAL										
								COOE	(m)	DIR.	FORC		(mba)		ULB	8018	100	0	DE₽THS	DOJEK	V ~ 115	J/4 3									
										30	518	3   2	166	1	33	100	7	Т	14												
1	MESSENGE	CACT	CAI							-	Τ		T	SPECIFIC			₹ Δ (	0	T	DND		-	PO4-P		A L - P	NO2-N	NO3-		4-51		5
	MESSENGE TIME	g NO.	111	PE	OEPTH (	m)	Ť	℃	\$	٠/٠.	SIC	- A M	T	MOMA	ALY-X1	ji 1	X 10 <sup>2</sup>	M. 3		CITY	02	ml/l	VQ - 01/1		01/1	40 - 01/			4 S1 - Q1 'I	pН	10
}	HR 1/10			$\rightarrow$					-		+		$\rightarrow$			+						_	+		-		+	-	-		÷
I			5	To I	0000	, 1	1	761	36	41	26	547	1	001	5721	۱ ر	000	n	151	171			l	1	-		I				
	010	)	OB:		0000			761		412		547		001	2120	, (	,000	0	151												
				To	0010		_	763	36			548		001	567	9 (	016	6		173											
				ΤĎ	0020			764	36			48		001			003			175											
	010	)	08	S	0026	5	1	765	36	449	26	549							15	176											
				TD	0030			765	36		-	548		001			0 4			177											
				TD	0050			766	36			547		1 00	583	3 (	079	9		180											
	010	)	OB:		0052			766		436		547						_		181											
				TD	0079			765	36			547		001	5901	5 (	11	8		184											
	010	,	OB:		0078			765 765	36	436		548 548		001	E 0.7	, ,				185											
	010	`	08:	ID	0100		_	765	_	439	_	548		001	591	, (	15	0	_	188 189											
	010	,		TD	012			764	36			548		001	606	9 (	19	А		192											
				ĪD	0150		_	763	36			548		001			23			196											
	010	)	OB.		0158		_	763	_	429		547								197											
			\$	TD	0200	)	1	738	36	40	26	551		001	596	3 (	31	9	15	196											
	010	)	08		T0209		1	732	36	394		552							15	196											
				τD	0250		_	717	36	_		553		001			39			198											
			-	TD	0300		_	583	36	_		557		001			47	_		195											
			_	TD	0400			560	36			569		001	482	0 (	63	1		172											
	010	,	08:		T0418			530	36	039		572 588		001	2 7 7	. ,	77	,		165											
	010	,	0B:	TD	050			362 315		697		592		001	522	5 (	,,,	1		121 108											
	010	,		T D	0600			115	35			709		001	1 20	<b>a</b> (	89	2		049											
	010	)	08		T062			061		343		713		001	127		, 0 ,	,		032											
				Tο	0700			890	35	_		731		000	912	0 (	99	5		981											
				TD	080			710	35			749		000			07			927											
	010	)	OB:	S	0838		0	654	35	044		754							14	911											
				TD	0900			590	35			762		000			14			896											
				TO	1000			503	35			772		000	507	5 :	20	0		877											
	010	)	ОВ		1058			461		025		776				_		_		869											
				T D	1100			456	35	_		776		000	_		124		_	874											
				TD TD	1200			444	35 35			778 778		000			29			886											
	010	`	08		1300 1340		U	432		009	2	1 10		300	40U	٠.	134	Ţ	14	897											
	010	,		TD	1400		n	420		00	2.	7 <b>7</b> 9		000	461	a .	38	7	14	909											
				TD	1500			407		99		779			461		43			921											
	010	)	08		T162			392		978		780		,,,		-		-		935											
	- 1 -		-5	-		-	-		- '		-																				

REFERENCE CTRY 10.		ATITUOE		GITUOE		ARE	STATION TI		YEAR	CRUISE NO.	5	ATOR'S TATION		OEPTH TO BOTTON	DEPTI OF S'MPL	085	WAVE SERVATION		WEA- THER CODE	CFONO		5	NOOC STATION NUMBER
	-	1/10	-	1710	10	+ - +	MO DAY H		1040	+			-		_	-	1 1 1	SEA		TYPE AM	-		
311240	EN   3	5015N	04	8015W	1113	58		160	1968		OO		7	4297	13	30	2 3		X 5	9   5	I		0009
						COLOR		SPEED	MET	>- ├─	ORY	WET	COD	NO, OBS.	Caren	ECIAL VATIONS							
						CODE	IRANS. OIR.	FORCE	(mbi		ULB	BULB	000	DEPTHS	Costx	VA 110143							
							21	S13	20	7 1	56	133	7	13									
	MESSENGE	AST C	ARD				Ι	Τ		SPECIFIC	VDIII	45 3	ΣΔ D	150	UNO		PO4~1	. 10	01A L - P	NO2-N	NO3-N	5104-5	T
	TIME OF		YPE	DEPTH (m)	T	"C	5 %.	SIGA	A A - T		ALY-XI	07 0	ΣΥΝ. Μ Χ 10 <sup>3</sup>	VEL	OCITY	D 2 m1/1	μο = a1,		g = at/1	μg - α1/I	μg - οt/l	μg - α1/	
	HR 1/10						+	+					-				+	+					+
			d T	0000	1	733	3635	264	49	001	550	<b>າ</b> ່ດ	000	15	162			1	- 1		l	I.	1
	160	OE		0000		733	36354	264			,,,,				162								
			OT	0010	_	735	3636	264		001	557	0 0	016		164								
		9	TD	0020	1	737	3636	264	8 4	001	563	8 0	031	15	166								
	160	OE		0022	_	737	36356	264							166								
			STD.	0030		737	3636	264		001			1047		168								
			STD	0050		738	3636	264		001	575	6 0	078		171								
	160	08		0066	_	738	36358	264		001	500				174								
	160	OE	STD	0075 0088		738 737	3636 36363	264		001	202	9 6	118		175								
	100		510	0100	_	737	3636	26		001	589	1 0	157		179								
			STD	0125		737	3636	264		001			197		183								
	160	08		0132		737	36358	264					• .		184								
			TD	0150	1	737	3636	26	48	001	608	4 0	237	15	188								
	160	OE	38	T0177	1	738	36358	26	48					15	192								
			OT 6	0200		728	3634	26		001			318		193								
			5TD	0250		695	3630	26		001			398		191								
	140		STO	0300		650	3623	269		001	550.	2 C	476		184								
	160	OF		10355		585	36118	260		001	/. c c		627		172								
	160	Ot	TD	0400 0442		518 450	3600 35888	26°		001	477	4 (	1621		157								
	100		STD	0500		351	3574	26		001	321	8 0	766		117								
	160	O.		T0529		293	35665	26		-01	J _ L		50		101								
			STD	0600		081	3538	27		001	089	6 0	886		036								
	160	OF		0695	0	855	35124	27						14	966								
			STD.	0700		846	3512	27		000	-		986	-	963								
			STD	0800		687	3505	27		000	722	9 1	067		918								
	160	OE		T0863		617	35018	27		000					900								
			STD	0900		609	3502	27		000			135		903								
	160	0	STD	1000 1095		586 558	3503 35130	270	52 730	000	620	ッ 1	198	14	911								
	160		STD	1100		556	3504	27		000	585	Q 1	259	14	915								
			STD	1200		522	3505	27		000			315		918								
			STD	1300		482	3506	27		000			367		919								
	160	oi		11338		466	35058	27				•			919								

0. 0	SHIP	LATITUO		LON	GITUDE	DRIFT	200	SOEN	STATION	ATI	,	YE AR	CRUISE NO.		OR'S SICIN MBER	DEF BOTT	0	MAX. DEFTH OF S'MPL"		WAV ISERVA	/E TIONS PEP SE	THER COD	CODE	S	NODC TATION TATION	4
10.			1/10	_	1/10	-	10*	1,		Y HR			-			F 0.4		+	-			× 1	8 5		 001	
40	EN	3456	N	04	754 W		113					968	E09 0	_		508	84	16	25	11	2	X 1	1 0 13	1	001	O [
								W.A		WI		BARC	)-	TE AA P	V			SPE	CIAL							
								COLOR	TRANS E	77 K.	SPEED	METE			WET CO	DEP	THS	OBSERV	/ A TION S	1						
								0000	-	$\rightarrow$	FORCE	20	_		172 7	1	4									
-						_	_		<u> </u>	Щ,		120	1 200					1		-			T		Т	
~	ESSENGR		CA		DEPTH	(m)	,	r *c	5 .	.	SIGM	A - T	SPECIFIC VO	DLUM	UTN.	M		DOITY	Oz mi		04-P	TOTAL-I				Н
  -	TIME 0	Ÿ NO.	1.4	P€									ANOMALI		x 10	3	AFL	JUIT		1 1/2	- 41/1	pg - 0.71	py - ar	pg - on	 -	
F		1					1																			
- 1		1 1	S	' מד	000	0	1	820	3640	ì '	263	1	00171	74	000			188								
	194	,	08		000	0	1	1820	3640	4	263	1						188								
	•			TD	001	0	1	809	3641		263	5	00169	912	001			186								
			S	TD	002	0	1	1801	3642		263	7	00167	714	0.03		-	185								
	194		ОВ	5	002	6	1	1797	3641	8	263							185								
			5	TD	003	0		1796	3642		263		00166		005			186								
			S	ΤD	005	0	1	1793	3642		263		00166	515	0.08			188								
	194		08	5	005			1793	364		263							188								
			S	TD	007			1791	3642		263		00166	577	012			192								
	194	+	OB	S	007			1791	364		263		0014	700	0.17			192								
				TD	010			1789	364		264		0016	/38	016			195								
	194	4	08		010			1789	364		264		0017	7 F F	020			196 199								
				TD	012			1788	364		264		0016		025		-	203								
			_	TD	015			1787	364		264		0016	162	02:			204								
	194	4	ОВ		015			1787	364		264		00168	827	033			210								
				TD	020			1784	364		264		00100	021	03.			211								
	194	4	08		T021			1782 1756	364 364		264		0016	5 R 3	0.41			210								
			_	TD	025			1724	363		265		0016		050			208								
				TD	030 040			1659	362		266		0015					204								
			0B	TD	T042			1643	362		266		001	, 01	0.50			203								
	194	4	-	s s	050			1466	359		26		0014	312	083	2		156								
	194		08		052			1402	358		268							139								
	1 7.	-		TD.	060			1261	356		269		0012	626	09	•6	15	102								
	194	4	OB		T063			1185	355		270	) 4					15	081								
	1,	•		STD	070			1019	353	7	27	23	0010	083	100	0	15	030								
			_	STD	080	0		0804	351	8	274	43	0008	062	11!	1		1965								
	19	4	OB		085	0		0719	351	17	27	50						939								
				STD	090	0		0662	350	9	27	56	0006		_			925								
			5	STD	100	0.0		0570	350	5	27		0005	839	12	37		1904								
	19	4	08	35	T106	6		0523	350		27							896								
			5	STD	110	0		0514	350		27		0005					898								
			5	STD	120			0488	350		27		0005		_			904								
				STD	130			0464	350		27		0004	842	2 14	45		911								
	19	4		35	134			0455	350		27		000.			2.2		4914								
				5TD	140			0442	350		27		0004	-	_			4919 4927								
				STD	150			0423			27		0004	08.	1 15	54		4921								
	19	4	0.6	3.5	T16:	16		0402	349	77	27	19					1 4	+720								

	нір	LATITUE	DE .	LONGITUDE	DEBIT NDC1	MARS!		STATION	TIME		YEAR	CRUIS	DRIGIN	STATIC	)N	1	DEPTH TO	MAX DEPTH OF		WAVE ERVATI	ons	WEA- THER	CODES		NODC STATION NUMBER
o, co	DE		1/10	11/10	- ×	10*	1.	MO DAY	HR,1	/10		NO.		NUMB	ER	80	DITOM	S'MPL"	S DIR.	HGT PE	SEA	CODE	TYPE AN	1	 4UWBEK
40 E	N :	34590	) N	047580W		113	47	03 12	18	7 1	968	EO	9 01	1		4	526	15	23	1 2		X 1	6 2		0011
O/ L		, , , , ,	,,,	0-11-20011	1 1	1	WA		WIN		BARG	1-3	AIP TE	MP °C		Ť	NO.	101	CIAL						
							COLOR		19.	PEED	METE	R	DRY	W E		0.6	OBS.		ATIONS						
						ļ	CODE	Im1	F	OFCE	lmbe	-+-	8U18	BUI		+									
								2	1   5	12	19	3   2	200	17	8 7		14								 
	SSENGE TIME OF	CAST NO.	CARE		lm 1	ī	*c	5 %		SIGN	\A-T		MALT-X		₹ △ ( DYN. ;	D M 3	VEF O		O 2 ml/1	PO.		TOTAL = P ug = 01/1	NO2-N ug - 01/1	NO3=N ug - 01/l	
17.6	17 10																								
		1	ST	000 م	0	1 1 8	320	3643	1	263	33	00	1702	2 '	000	0	151	88		,			,	,	
	187		085				320	3642		263							151	188							
	101		ST				911	3642		263	35	00	1688	30	001	7	151	187							
			ST				305	3642		263	36	00	1680	9	003	4	151	187							
	187		OBS	00.2	7	18	301	3641	1	263	37						151	187							
			ST		0	18	300	3641		263	37		1676		005		151								
			s T	0 005	0	1	797	3641		263	38	00	1672	22	008	4	151								
	187		OBS			1	796	3641	4	263							151								
			ST	D 007	5	_	794	3642		263		0.0	1671	11	012	6	151								
	187		085	007	9		794	3642		264						_	15								
			ST				796	3643		26:		00	1681	11	016	8		197							
	187		OBS				797	3642		263						_		198							
			SI				795	3643		263			1685		021		152								
			ST			_	790	3643		264		00	1680	)4	025	2	152								
	187		OBS				788	3642		264		00	1	0.6	022	_		204 206							
			ST				770	3640		264		00	1668	54	033	0		206							
	187		OBS			_	768	3640	_	264		00	1701	10	042	^		212							
			ST				764	3636		264			1694		050			213							
			51				741 638	3632 3624		268			1551		066	-		197							
			51				638	3623		266		00	1))	1 )	000	'		197							
	187		0BS				474	3593		26								158							
	187		51				458	3591		26		0.0	1421	14	081	6		154							
	187		085	-		-	268	3563		26				• .		-		102							
	101		ST				244	3561		26		00	1229	92	094	8		096							
			51	-			071	3539		27			1087		106			049							
			ST	_			913	3523		27			0948		116	6	150	006							
	187		OBS	-			841	3517		27							14	987							
	10.		51				757	3514		27		00	0778	89	125	2	14	963							
			51	_			624	3510		27	62	00	0623	38	132	2	14	927							
			51	_			531	3506		27	71	00	0535	51	138	0	14	905							
	187		OBS				525	3505	7	27	71							904							
			51		0	0	500	3504		27	73		0519		143	3		909							
			51	TD 130	0	0	473	3502	2	27		00	050	81	148	4		915							
	187		083	131	5	0	469	3501		27								915							
			51				446	3500		27			0496		153			920							
			51				418	3499		27		00	0476	61	158	3		925							
	187		083	5 T152	1	0	412	3498	32	27	78						14	926							

ID.	SHIP	LATITU	DE	LOP	AGITUDE E	S sor	SDEN		ION TI	IM E	YEAR	CRUISE	DRIG IN	TATION		DEPTH TO	DEPTH	OB	W A V E		THER			T	NODC
NO.	CODE	•	1/10		1/10	10"	11"	MO	DAY H	R.1/10		NO.	N	UMBER		BOTTON	S'MPL'S	0.0	HGT PE	ER SEA	CODE	TYPE AND	1		NUASER
240	EN	3450	ΩN	04	8051W	113	48		13 (		1968	E0.9	012	2		5011	15	22	2 3		x 1	8 3			0012
(/	LI4	J <del>4</del> JC	011	0 4	005141	1115	WA			VIND		1	AIR TEN				1 12		15 1-	i	1 ~ 4	1 0 1 2			0012
							_	TRANS	+	SPEED	BAR	0	DRY	WET	VIS	NO. 085.	SPEC OPSERV								
							CODE	(m)	OIR.	FORC			ULB	BULB	1	DEPTHS	OFILE	* IIDI* 3							
									21	509	23	0 1	72	161	7	14									
			1					4-				T			-	1			1				T		
	MESSENG	CAST NO.	C A		DEPTH (m)	1	10	5	٠	SIG	M A -T		ALY-11	M. D	νη	SO	OCI"Y	02 ml/		4←P 01 1	10141-2	NO3-N	NO <sub>3</sub> =N	SI O4 -	
- 1	HR 1/10							-		-					x 103		02.7						yg • al₁ l		-
														1						j					
				TD	0000		793	36			38	001	6536	5 0	000		180								
	09	3	ов		0000		793		404		38						180								
				ΤO	0010		<b>7</b> 93	36			38		656		017		182								
				TO	0020		794	36			38	001	659	5 0	033		183								
	09	3	ОВ		0025		794		409		38						184								
				TD	0030		794	36			38	001	663	5 0	050		185								
	09	3	ОВ		0049		794		406		38						188								
		_	_	TD	0050		794	36	_		38	001	671	9 0	083		188								
	09	3	ОВ		0073		792		401		38						191								
		_	_	TO	0075		792	36			38	001	679	5 0	125		192								
	09	3	ов		0097		791		400		38	001					195								
				T 0 T 0	0100		791 793	36			38		686) 690		167		196 200								
	09	2	08	_	0125 0146		795	36	41 424		39	001	090	4 0	209		204								
	09	9		Tn.	0146		793	36			39	001	6941	0 0	252		204								
	09	2	08		T0196		772		403		43	001	074	0 0	202		206								
	0 9	,		TD.	0200		772	36			43	001	676	e 0	336		206								
				TD	0250		763	36			42		705		420		211								
				TD.	0300		734	36			45		687		505		211								
	09	3	OB	-	T0390	_	636	_	226		62	001	0011				195								
	• •	-		Τo	0400		620	36			63	001	543	4 0	667		191								
	09	3	ов	_	0486		464		924		78						153								
				TO	0500		434	35			80	001	399	5 0	814	15	146								
	09	3	OB	5	T0585	1	254	35	605	26	97					15	097								
			S	TD	0600	1	216	35	56	27	01	001	211	1 0	944	15	086								
			S	TD	0700	0	991	35	30	27	22	001	010	2 1	055	15	019								
	09	3	0в	5	0786	0	837	35	161	27	36					14	975								
			5	ΤD	0800		819	35	16		39		844		148	14	970								
				ŦΟ	0900	0	704	35		_	54	000	705	0 1	226		942								
	09	3	ОВ		0989		619		100	_	63						923								
				ΤD	1000		611	35			64		605		291		922								
				TD	1100		545	35			69		554	_	349		911								
				TD	1200		492	35	_		73	000	515	6 1	403		906								
	09	3	ОВ		1246		472	_	019	_	74	000					905								
			-	TO	1300		452	35			76		487		453		906								
				TO	1400		425	34			77		474	_	501		911								
	0 -	_		TO	1500		411	34			78	000	478	4 1	549		922								
	09	3	ОВ	5	T1502	C	411	34	974	27	78					14	922								

EFERENCE	SHIP				MARSDEN	STATION TI		OFIGINATI	2°AC	OEPTH OEP		WAVE RVATIONS	WEA-	CLDUD			100C
DE NO	C00E	LATITU	DE LC	NGITUDE E		MD DAY H	YEAR		TION MBER	BOTTOM O	f	HGT PER SE	THER	TYPE IAM			UMBER
1124	0 EN	3458		4756 W	113 47			E09 013		4572 1	5 16	1 3	×1	8 4		(	001
	-, ,				WA	TER W	INO BAR	A ID TEAAD	°C vis.	NO.	PECIAL						
					COLO		SPEED MET		WET CODE	OBS. DEPTHS OBSE	RVATIONS						
						15	512 32		83 7	14							
						117	312 36	T		<del></del>	<del></del>	1					
	MESSENGE TIME	CAST	CARO	DEPTH (m)	1 ℃	s ·/	SIGMA-T	SPECIFIC VOLUME	₹ △ 0 N. M	. SOUNO VELOCITY	D2 ml/l	PO4-P	TOTAL-P	NO2-N ug - al/l	NO3-N yg-m/l	\$1 O4 =\$i pg = at/1	p1
	HR 1/10			-					X 10°	-	-	-	-	-	-	-	-
		į	c t o	0000	1808	3643	2636	0016737	0000	15184		1	l	ŀ	l		1
	124		STO OBS	0000	1808	36425	2636	0016737	0000	15184							
	127		510	0010	1804	3642	2637	0016692	0017								
			STD	0020	1800	3642	2638	0016647	0033	15185							
	124		085	0024	1799	36420	2638			15186							
			STD	0030	1798	3642	2638	0016642	0050								
	124		085	0049	1795	36420	2639	0014441	0083	15189							
	126		STD	0050 0073	1795 1792	3642 36413	2639 2639	0016641	0003	15189 15192							
	124		085 STD	0075	1792	3641	2639	0016703	0125								
	124		OBS	0098	1793	36421	2639	0010,03	0107	15196							
			STD	0100	1793	3642	2639	0016760	0167	15196							
			STD	0125	1788	3642	2641	0016728	0209	15199							
	124		085	0147	1784	36420	2642			15201							
			STD	0150	1784	3642	2642	0016727	0250								
	124	٠	OBS	10197	1776	36421	2644	0016681	0334	15207							
			STD	0200 0250	1775 1761	3642 3642	2644 2647	0016556	0417								
			STD	0300	1746	3641	2650	0016422	0500								
	124		OBS	T0391	1720	36400	2656	0010722	0,00	15222							
			STD	0400	1711	3638	2656	0016147	0662								
	124	,	085	0489	1572	36116	2669			15190	1						
			SID	0500	1543	3607	2672	0014897	0818								
	124	•	OBS	T0587	1318	35718	2693	0012644	0055	15120							
			STD	0600	1280	3567	2697	0012566	0955								
	124		STO OBS	0700 0779	1024 0863	3534 35183	2719 2734	0010390	1070	) 15032 14984							
	124	,	SID	0800	0831	3518	2739	0008493	1164								
			STD	0900	0699	3515	2756	0006829	1241								
	124		OBS	10971	0625	35129	2764			14923	3						
			STD	1000	0605	3512	2766	0005811	1304								
			STD	1100	0544	3509	2772	0005288	1359								
			STD	1200	0497	3506	2775	0004974	1411								
	124	•	08S ST0	1212 1300	0492 0464	35061 3504	2775 2777	0004813	1460	14908							
			STD	1400	0444	3504	2778	0004613	1508								
	124		OBS	T1451	0440	35014	2778	3004,73	1,00	14926							

ID.	SHIP	LATITU	O£	LONG	SITUOE	POUFF POCTE	MARS SQU	DEN ARE	STAT	ION TI	ME	YEAR	CPUIS	ORIGINA	TOR'S ATION		DEP1H TO	MAX. DEPTH	08	WAVE SERVATIO	INS.	WEA- THER	CLO				ODC
NO.	COOF	•	1/10		1/10	1° =  -	10"	1.	MOI	DAY H	R 1/10		NO.		UMBER	- 1	BOTTOM	S'MPL	S DIP.	HGT FEE	5 E 4	CODE	1191	A AA T			BERNO
240	EN	3514	N	047	41 W	l l	13	57	03	5 0	92	1968	FOG	014		1	2012	15	13	1 3		×1	8	3			0014
	2.1						1	WAT			VIND	BARG	-	AIR TEM		- 1	NO.	1		1 1	1	,	, .	_		, ,	.01
							Ì	COLOR	TRANS.	OIR.	SPEED	METI	ER	DRY	WET	VIS.	085.	OBSERV	CIAL								
							ļ	CODE	(m)	0.12	FORCE	(mbs	1	OLB	BULB	_	DEPTHS										
										13	510	32	5   1	78	172	7	14										
ſ	MESSENGE	CAST	CAR	10					Τ.				SPECIFI	C VOLUM	E S	7 0	10	UND		. PO	, ,	OTAL-P	NO2-	N NO	3-H	5104-5-	
- 1	TIME HR 1/10	NO.	111		DEPTH	(m)	1	℃	,	•	SIGN	4 A -T		ALT-210		10 <sup>3</sup>		OCITY	0 2 ml/	40 - 0		ug = et/1	ug - 0			ug - a1/i	pН
1	17 17 10	+				-			+		+				1		+				-+-			+	-		
- 1		1	, S1	ם ד	0000	o 1	1.5	824	364	. 7	26	3 2	່ດດາ	7066	00	nn	1.5	189		1	-		!	ì	- 1		
	092	,	08	-	0000			824	364		26		001	1000		00		189									
	- / -	_		T D	001			810	364		26		001	6796	00	17		187									
				TD	002			800	364		26			6625				185									
	092	2	OB:	S	002	4	1	797	364	22	26							185									
			S.	ΤD	003	О	1	795	364	•2	26	39	001	6571	00	50	15	185									
	092	2	OB:	S	004	9	1	789	364	18	26	40					15	187									
			_	TD	005		_	789	364		26		001	6499	00	83		187									
	092	2	OB:		007			785	364		264							190									
		_	_	TD	007		_	785	364	-	26	-	001	6492	01	25		190									
	092	2	OB:		009		_	784		10	264							193									
				TD.	010		_	784	364	_	26			6627				194									
	092	2	OB:	TD	012			783 782	364	12	264 264		001	6683	0.2	UB		197									
	092	e		TD.	015			782	364		264	_	001	6731	0.2	/. a		201 201									
	092	,	OBS	_	T019			778		26	26	_	001	0131	. 02			208									
	- , .	_		TD	020			777	364		26		001	6688	03	33		208									
				TD	025			753	364		26			6490				209									
				TD	030			729	363	37	26			6287				210									
	092	2	083	S	T039	2	10	686	363	327	26	58					15	212									
			S.	TD	040	0	10	677	36:	31	26	59	001	5865	0.6	59	15	210									
	092	2	OB:	S	049			535		42	26							178									
				TD	050			510	360		26		001	468]	. 08	11		171									
	092	2	OB:		T058	-	_	307		82	26							116									
				ID	060			272	356		26			2698		_		106									
	000	_		1 D	070			053	35		27		001	0690	10	65		043									
	092	c	OB:	S ID	078			900 865	35	217	27		000	8900	11	43		998 988									
				TD	090			708	35		27			7037				944									
	092	2	OB:	-	T097			618		106	27	-			12	ر -		920									
	- , ,	_		7 D	100	-		602	35		27		000	5930	13	0.8		918									
				T D	110			544	350		27			5439				911									
				TD	120			500	350		27			5147				909									
	092	2	OB:	-	121		0	493	350	041	27	74			_			910									
				TD	130			468	350	03	27		000	494(	) 14	68		913									
			5	ΤD	140	0	0	449	350	2	27	77	000	4861	15	17		921									
		2	OB:	_	T146	^	0	444	26/	17	27	77					3.4	930									

SHIP CODE LATIN	UDE   10	NGITUDE TO NGITUDE	MARSDEN SQUARE	STATION THE	YŁAR	ORIGII CRUISE NO.	STATION NUMBER		DEPTH TO BOTTOM	MAX DEPTH OF S'MPL"	O8	WAV SERVA		WEA- THER CODE	CLOUD COOES		8	NOOC TATION REBMU	
40 EN 352	65N 04	752 W	113 57		63 1968	E09 01	5		4755	15	09	1 2	2	X4	8 6			0015	
			WAT	ER VA	IND BAR	O- AIR TE	MP C	VIS	NO.	586	CIAL								
			COLOR	TRANS. DIR.	SPEED ME1		WET	CODE	DEPTHS		ATIONS	ļ							
							-	7											
h				07	510 33	5   183	1	<u> </u>	14			1					,		_
MESSENGE CAST		DEPTH (m)	1 °C	s ·4.	SIGMA-T	SPECIFIC VOL	UME   E	A D	sou		0 2 ml/			TOTA L - P	NO2-N	NO3-N	SI O4-Si		5
HR 1.10	TYPE					ANOMALY-1	1107	103	VELO	CITY		×9	· at/1	μg = et/1	ا/la - ولا	yg - al/l	μg - α1/l	pH	c
																			$\top$
	SID	0000	1840	3644	2629	001739	6 00	000	151	94							,	'	
163	OBS	0000	1840	36440	2629				151	94									
	510	0010	1833	3643	2631	001726	0.0	017	151	93									
	STD	0020	1824	3643	2633	001714	1 00	34	151	92									
163	085	0025	1820	36429	2633				151	92									
	SID	0030	1816	3643	2634	001702	22 00	051	151	92									
	STD	0050	1805	3642	2637	001685	6 00	085	151	92									
163	OBS	0050	1805	36424	2637				151	92									
	STD	0075	1799	3642	2638	001679	8 0	127											
163	08.5	0075	1799	36424	2638				151										
163	OBS	0099	1782	36433	2643				151										
	SID	0100	1782	3643	2643	001641		169											
	STD	0125	1778	3644	2645	001636		210											
	STD	0150	1775	3644	2646	001633	9 0:	250											
163	085	0150	1775	36445	2646				152										
163	OBS	10199	1771	36452	2647				152										
	510	0200	1770	3645	2647	001635		332											
	51D 51D	0250 0300	1741 1711	3640 36 <b>3</b> 6	2651	001616		413 494											
163	OBS	T0397	1653	36267	2655 2662	001597	6 04	494											
105	SID	0400	1646	3625	2662	001556	4 0	552	152										
163	OBS	0499	1418	35856	2683	001996	0 00	552											
100	SID	0500	1416	3585	2683	001374	4 0	798	151 151										
	STD	0600	1200	3554	2702	001197		927											
163	OB S	T0600	1200	3774	2102	001177	) 0	, ,	1)0	700									
100	510	0700	0973	3530	2725	000976	.0 10	35	150	113									
163	085	0799	0795	35156	2742	000710			149										
	SID	0800	0794	3516	2743	000808	1 1	125	_										
	SID	0900	0671	3513	2758	000654		198											
163	OBS	T0999	0576	35104	2769				149										
	SID	1000	0575	3510	2769	000552	1 1	258											
	SID	1100	0519	3506	2772	000516		311	149										
	SID	1200	0475	3503	2775	000492		362											
163	085	1253	0457	35018	2776				149										
	5 T D	1300	0450	3501	2776	000482	3 14	+11	149										
	STD	1400	0436	3500	2777	000480	7 14	459	149	16									
	STD	1500	0422	3499	2778	000478	4 15	507	149	27									
163	085	T1518	0419	34991	2778				149	228									

	REFERENCE	SHIP			LONGITUE	= 5	MARSI		STATION	TIME				ORIGIN			DEP"H	MAX		WAVE	WEA	. CLOUD	_	- T	NODC	1
	CTRY ID.		LATITU			0 0					1 '	EAR	CRUIS	E :				, OF			0001				MOITATZ	
	-	-	2500					-						+		+		_	+ -		^	1000 1400		-		-
COURT   1/2   DR   DR   PATE   DR   PATE   DR   PATE   DR   PATE   DR   PATE   DR   PATE   DR   DR   PATE   DR   DR   DR   PATE   DR   DR   DR   DR   DR   DR   DR   D	311240	) EN	3503	N	04804 W	1	1113				19	968	EO					42	0.6	1 3	X8	8 6			0016	
							-			5051	5				_	V15.		592								
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STO   0000   1854   3647   2628   0017479   000   15198   15189   15		71.474	NO.			(m)	T	*C	2	\$11	GM A	-1	ANO	MALT-1	07	NN. M			02 ml			NO2=N ug = 01/		11 O a - 5	pH	10
164		HR 1/1	0		-		1		+	-					_	A 10			_	_				-	-	+
164		1		ст	0 000		1 19	6.4	3647	2	(10		001	1747	0 0	000	1.5	100								
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164		16	4	085	005	0	17	90	36425	5 2	541	ì														
164				ST			17	89	3643	2	641	l	001	1654	2 (	127	15	191								
STO   0100   1789   3643   2641   0016622   0168   15196     STO   0125   1787   3643   2641   0016668   0210   15199     164   085   0149   1784   3642   2642   0016727   0252   15202     164   085   70197   1772   36408   2644   0016681   0355   15206     STO   0200   1771   3641   2644   0016681   0355   15206     STO   0200   1771   3641   2644   0016681   0355   15206     STO   0300   1739   3639   2650   0016420   0501   15213     164   085   70399   1708   36369   2650   0016420   0501   15213     164   085   0498   1537   36056   2672   0016420   0501   15219     164   085   0599   1331   35735   2692   0016820   0818   15179     164   085   07599   1331   35735   2692   0013096   0958   15126     STO   0600   1328   3573   2692   0013096   0958   15126     STO   0700   1078   3541   2715   0010851   1078   15052     STO   0800   0874   3521   2734   0009004   1177   14992     STO   0800   0874   3521   2736   0007051   1257   14999     164   085   1253   0482   35047   2775   000836   1377   14919     164   085   1253   0482   35047   2775   0004834   1529     STO   1000   0604   3512   2766   0005797   1321   14919     164   085   1253   0482   35047   2775   0004834   1528   1499     164   085   1253   0482   35047   2775   0004834   1528   1499     164   085   1253   0482   35047   2775   0004894   1479   14910     164   085   1253   0482   35047   2775   0004894   1479   14910     164   085   1253   0482   35047   2775   0004894   1479   14910     164   085   1253   0482   35047   2775   0004894   1479   14910     164   085   1253   0482   35047   2775   0004894   1479   14910     164   085   1253   0381   34999   2782   0004658   1693   14999     194   085   2127   0333   34997   2789   0004495   2040   15088     194   085   2277   0239   34907   2789   0004495   2040   15088     194   085   2927   0239   34907   2789   0004495   2040   15088     194   085   4152   0224   34902   2790   0004198   2654   15273   15000     194   085   4152   0224   34902   2790   0004198   2654   15273   15000		16	4								641	1					15	191								
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STO   0150   1784   3642   2642   2642   15206   15206   15206   1570   2020   1771   36408   2644													001	1666	8 (	210										
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164 OBS T0399 1708 36369 2656 1520   STD 0400 1706 3637 2656 0016131 0663 15219   164 OBS 0498 1537 36056 2672																										
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164				ST	060	0	13	28	3573				001	1309	6 0	958										
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STD   1000   0604   3512   2766   0005797   1321   14919																										
164 OBS T1000 0604 35121 2766 14919 STD 1100 0548 3509 2771 0005366 1377 14913 STD 1200 0502 3506 2774 0005071 1429 14910  164 OBS 1253 0482 35047 2775 STD 1300 0470 3504 2776 0004894 1479 14911 STD 1300 0447 3502 2777 0004894 1528 14921 STD 1500 0428 3501 2779 0004749 1576 14929  164 OBS T1504 0427 35006 2778 14930 STD 1750 0399 35000 2781 0004658 1693 14959 194 OBS T1935 0381 34992 2782 0004689 1810 14994 194 OBS 2436 0347 34985 2785 15054 STD 2500 0330 3497 2789 15004 STD 2500 0330 3497 2789 15004 STD 3000 0238 3491 2789 0003900 2250 15104 STD 4000 0226 34900 2789 0004198 2654 15273 194 OBS 4152 0224 34902 2790 15300																										
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REFERENCE	SHIP	LATITU	ς. Τ	LONGITUDE	V DCTR	MARSDEN SDUARE	STATION TI		YEAR	_	RIGINA			DEPTH	DEPTH	- 08	SERV	VE A TIONS	WEA	CODES			NDDC TATION
CODE NO.	CODE	LATITU	1/10	13/10	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	10, 1,	MD DAY H			CRUISE ND.	51 N1	A TION	1	BOTTON	S'MPL"	1		PER SE				N	UMBER
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						COLO		SPEED	METE	>	RY	WET	CODE	OBS.		CIAL ZADIDAS							
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							1	1		SPECIFIC	VOLUA		AN. M		DND		1	PD4-P	101AL-	NO2-N	NO3-N	SID4-SI	ĺ
	MESSEN	GR CAST	CAI		(m)	r *C	5 %.	SIGM	A-1	ANOM.	ALY-I10	, 0	YN, M x 10 <sup>3</sup>	VEL	DCITY	O 2 m1/		0 - 01/1	1012 (-)	ug - al/l	νg - 01/1	yg - 01/1	
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				ro 000		1835	3647	263		001	1061	01	000		193								
	10	0	08:			1835 1835	36468 3647	263 263		001	7117	0.0	017		194								
				TD 001 TD 002		1830	3646	263		001			034		194								
	10	10	08	-		1826	36463	263		001					194								
	10	,,,		TD 002		1813	3645	263		001	6779	0	051		191								
	10	00	ов	_		1786	36428	264	2					15	186								
	-	-		TD 005	0	1786	3643	264	2	001	6356	0	084		186								
	10	00	08	s 007	12	1785	36437	264	3						190								
			S	TO 007	15	1785	3644	264		001	6376	0	125		190								
	10	00	08			1785	36428	264							193								
			-	<b>TO</b> 010		1785	3643	264			6506		166		194								
				TD 012		1784	3643	264		001	6568	3 0	208		198								
	10	00	08			1783	36435	264	-	001			249		201								
				TD 019		1783	3644	264	-	001	655	, 0	247		202								
	10	00	08			1782 1780	36442 3644	264 264		001	6652	, ,	332		209								
			_	TD 020		1768	3644	264			6542	_	415		214								
				TO 025 TD 030		1755	3644	265			6424		497		218								
	17	00	08			1735	36436	265		001					226								
	1.			TO 040		1710	3639	265		001	605	. 0	660		221								
	10	00	08			1588	36164	266						15	193								
	•			TD 050		1522	3604	267		001	465	3 0	813	15	176								
	10	00	08		73	1350	35749	268	39						129								
	_		S	TD 060	0	1289	3565	269			289	-	951		5112								
			S	TD 070		1078		271		001	114	3 1	071		052								
	10	00	98			0958	35249	272							017								
				10 080		0879		273	_		883	_	171		1994								
				TD 090		0708		279		000	659	8 1	248		4945								
	1	00	08			0643		276		000		, .	210		927								
				TD 100		0611		276			575		310	_	4922 4915								
			_	TO 110		0555		276		000	553	' I	367		4913								
	1	00	08			0515		27 27		000	540	1 1	421		4913								
			-	TD 120		0510 0475		277			518		474		4915								
				TD 130		0475	3500	27			503		525		4922								
	1	00	08			0447		27		500	,,,,,	- 1			4924								
	1	00	00	5 114.		U 7 4 7	34770	21						•									

REFERENCE CTOY ID.	SHIP	LATITUDE	10	ONGITUDE	DESET	MARS		STAT	ION T	IME	1 E # R	C.R	QRI UISE	GIN A1	OR'S TION		DEPTH TO	DEFTH OF			A VE VATIONS	w E-	e 1 cc	000			NODC
208 NO.	1000	1/	10	1/10	- <u>z</u>	10*	1.	40 E	DAY	FR.1/10	1		NO		MBER	j	MCTT08	S. W. B.F.	5 010	[H (	of PER SI	COL	TIPE	AUT		1 '	ANWAER
311240	EN	35080N	0	47580W		113	57	03	19	097	196	8 F	09	18			3383	16	09	2 2	3	x :	i	4			0018
J						[	WAT			WIND	, -	RO-		TEMP	. °C		NO.			֓֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	12 1	^ /		_	1	1	0010
							COLOR	TRANS.	DIR	SPEE	D MI	TER	DRY		W ET	VIS.	O o r		CIAL ATION	5							
						- 1	CODE	140)		FOR	-	bel	BUL	В	BULB		DEFINS										
									09	514	3	08	172	2	156	7	14										
	MESSENGE		CARD				°c	1	•/			5.0	ECIFIC V	OLUMI	\$	Δ. D.	sou	מאו			PO4=P	TOTAL-	, ND;	- N	NO3=N	5104-5	
	TIME HR 1/10	" NO.	TYPE	DEPTH 0	m,	,	-	,		216	MA-T	^	NOMAL	-1107		103	VELO		0 2 m	VI	µg = ±11	vg - a1/			νg - σ1/(	vg = 01/	
	111	-		1				-		+		+-					-	-		+			+	-			1
	1	1	STD	0000	) '	1 8	364	364	. 1	26	20	0	0182	213	100	00	152	מחי		1		!	1	-		l	1
	097	, ,	85	0000			364	364			20		~		00		152										
			STD	0010	)	18	363	364			21	0	0182	222	0.0	18	152										
			STD	0020	)	18	362	364	¥1		21		0182			36	152										
	097	· c	85	0026	5	18	361	364	06		21						152										
			STD	0030	)	18	347	364	•0		24	0	0179	947	0.0	55	152										
			STD	0050	)	17	799	363	37	26	34	0	0170	76	0.0	90	151										
	097		BS	0051	l	17	798	363	372	2€	34						151	189									
			STD	0075	5	17	790	363	34	2€	34	0	017	183	01	32	151	90									
	097	C	BS	0077	,		789	363	335	26	34						151	90									
			STD	0100		17	787	363	33	26	34	0	0172	83	01	75	151	94									
	097		8.5	0102		_	787	363	_		34						151	94									
			SID	0125		_	785	363			34		0173			19	151										
			STD	0150			783	363			35	0	0173	361	0.2	62	152										
	097	C	BS	0153			783	363			35						152										
			STD	0200		_	776	363			37	0	0173	362	03	49	152										
	097		BS	T0205			775	363			37						152										
			STD	0250			758	363			40		0172			35	152										
			STD	0300			739	363			43		0170		0.5		152										
	00-		STD	0400		_	701	362			550	0	016	709	06	90	152										
	097	Ų	BS	T0408			98	362		-	51		015				152										
	097		STD 8S	0500			37	359			65	U	0154	+89	0.8	51	151										
	091	Ü	STD	0511 0600			316 339	356			67 84	0	0138	220	09	0.7	151 151										
	097		BS	T0619			300	356			88	0	0136	20	UY	91	151										
	0 9 1	·	STD	0700		_	104	353			107	n	0116	.02	1.1	25	150										
			STO	0800			905	351			725		0099		_	33	150										
	097		BS	0820			371	351			727	0	009	, , ,	12	رر	149										
	- , ,	_	STD	0900			761	350			741	0	0083	364	13	24	149										
			STD	1000			552	350			53		007			02	149										
	097		BS	T1022			32	350	-		155				•		149	-									
		-	STD	1100			92	350			159	0	0069	74	14	71	149										
			STD	1200	)	05	46	349	9	27	163	0	0061	94	15	35	149	27									
	097	0	BS	1292	:	0.5	11	349	70	27	166						149	928									
			STD	1300	)	05	808	349	7	27	66	0	0059	927	15	95	149	28									
			STD	1400		04	+77	349	95	27	168	0	0051	755	16	54	149	932									
			STD	1500			+54	349	-	27	169	0	0056	88	17	11	149	939									
	097		8.5	T1556		0.4	444	349	222	2.7	70						149	1. /.									

Table IV.—Observed and interpolated oceanographic data for stations taken by USCGC MENDOTA at Ocean Station ECHO, 12 April-4 May 1968, prepared from NODC listing No. 31-1262

ERENCE SHIP	LATITUDE	LONGITUE	DEST	MAR SOU	DEN	STATION		YEAR			ATOR'S		DEP*H	DEPTH		WAY	VE TIONS		EA-	CLOUD		NODC
ID. CODE	1/10		1/10	10*			HR,1/1		CRUIS NO.		NU MBE		801104	S'MPL			PER SI		OE	TYPE A IA	T	NUMBER
1262 ME	34580N	04811	8W	113	48	04 12	179	196	8 E10	00	1		4481	15	13			2 X	0			000
					WA	ER	WIND		RO-	AIR TE	MP. °C	VIS	NO.	501	CIAL							
					COLOR	TRANS. DI	R. SPE	0.0	ETER	DRY	W E T	con	OBS.	DOSER	VA TIONS							
						1			44 2	11	20€	, 8	14									
MESSENGR TIME HR 1/10	TY NO. TY		PTH (mi	Т	*c	s ·/	s	IGMA~I		C VOLU	IME 107	¥ △ C 5YN. A x 10 <sup>3</sup>	SO VEL	UND OCITY	D <sub>2</sub> ml		04-2	PD TAL		NO2-N μg - αl/l	NO3-N pg - o1/l	
		_									_											
			000		872	3644		621	001	814	5 (	0000		203								
179			000		872	3644		621						203								
			010		850	3644		626		768		018		198								
170			020		829	3644		632	001	723	4 (	0035		194								
179			024		821	3643		633	201					192								
170			030		808	3643		636	001	680	6 (	052		189								
179			047	_	781	3641		642	20.					184								
. = c			050	_	780	3642		643	001	628	, (	085		184								
179			071		773	3643		646	001					186								
1.70			075		770	3643		646	001	606	, (	126		186								
179			092		759	3641		647	001					185								
			100		751	3640		648		592		166		184								
170			125		731	3636 3635		650	001	583	, (	20€		182								
179			141 150		723 723	3635		651	00.	580		245		182 183								
179			190		719	3634		652	00.	. 560	0 (	245		189								
117			200		715	3634		652	00.	.586		324		189								
			250		688	3630		656		. 569		)403		189								
			300		652	3624		660		547		0481		185								
179			377		577	3610		667	00.		) (	,401		173								
11,			400		546	3605		670	00.	480	2 (	633		167								
179			471		454	3589		678	00.	. 400	۷ (	,0,,		147								
1			500		420	3586		683	no:	377	2 (	775		141								
179			564		341	3576		692	٠٠.		,	, , , ,		124								
117			600		294	3568		695	00.	277	3 (	908		114								
			700		150	3547		707		175		031		078								
179			759		056	3536		716	00.		•			053								
1,,			800		987	3530		723	00.	024	2	1141		034								
			900		806	3516		741		841		1234		982								
179			959		690	3509		753	000	. J - I	•	. 2		946								
179			214		532	3508		773	000	529	7	449		925								
179			475		477	3504		776		511		1585		946								

RENCE									_													
	SHIP	LATITUDE	Lo	DAGITUDE E	MARSDE		STATION 1 (GMT)		YEAR		INATO		DEPTH	NEAX, DEPTH	-	WAVE		WEA-	000		T	NODE
NO.	COOE	1/1	- 1	1/10 5		1.	MO I DAY			ORUISE NO.	STAT	TION '	DT MOTTOR		DIR	SERVATION		THER	130 144 AV			TATION
1262	ME	35028N	04	48017W			04 13		968					1		HGT PERI					-	-7-4
,			, 0		112	WAT		WIND		4.10	TEMP.		4572	14	14		2	Y 1	3 6			0002
					cc	LOR	TRANS. DIR.	SPEED	M ETE	-		FT COOL	NO.	SPEC QBSERV								
					C	ODE	IMI DIN	FORCE	(mbs	8018		JLB CO.	DEPTHS	OBSERV.	A DUNS							
_							15	510	240	200	2	00 7	14									
	AESSENGR TIME 1R 1/10		ARD YPE	DEPTH (m)	1 7	:	\$ 14.	SIGM	A-T	SPECIFIC VI		₹ ∆ D DYN. M x 10 <sup>3</sup>	SOU		O 2 m1/	PD4=P		TA L P	NO7-N	N73-N 18-011	Si O <sub>4</sub> = Si µ2 + atri	рН
								1						-			-				-	-
1		' '	510	0000	185	5	3643	262	5	00178	30	0000	151	98							ļ	
	121	. 01	9.5	0000	185	5	36429	262				0000	151									
			STD	0010	185	3	3643	262		00178	39	0018	151									
			STD	0020	185	1	3642	262	5	00178	50	0036	152									
	121		3.5	0022	185	0	36420	262	5				152									
			OTS	0030	181		3640	263		00171	66	0053	151	91								
	121		35	0045	177		36380	264					151	81								
	121		STD BS	0050	177		3640	264		00162	50	0087	151									
	121		STD	0067 0075	177 177		36432	264					151									
	121		35	0090	176		3643 36432	264 264		00160	99	0127	151									
			STD	0100	175		3640	264		00159	72	01/7	151									
			STD	0125	172		3633	264		00160		0167	151									
	121			0135	172		36321	264		00100	00	0207	151 151									
		9	TD	0150	172		3633	265		00159	47	0247	151									
	121	08	3.5	T0179	172		36344	265				0247	151									
		9	TD	0200	171	7	3634	265		00159	10	0327	151									
			σŢ	0250	169	7	3631	265	4	00158	33	0406	151									
			TO	0300	166		3626	265	8	00156	71	0485	151	90								
	121			T0356	162		36189	266					151	84								
	121		TD	0400	157		3610	266		00150	57	0638	151	76								
	121		TD.	0445 0500	152		36018	267		00100			151									
	121	OE		70535	144 139		3592 35847	268		00139	50	0783	151									
	•••		To	0600	128		3567	2686 2691		00125	0.4	0016	151									
			TD	0700	109		3543	271:		00129		0916 1035	151 150									
	121	OE	5	0714	107		35398	271		00110	, 1	1000	150									
		5	TO	0800	089	5	3523	273		00091	78	1136	150									
	121	OB	S	T0895	074	3	35107	2746		_			149									
		5	TD	0900	073	9	3511	274	?	00077	5 2	1221	149	_								
			TD	1000	065		3511	2758	3	00066	84	1293	149	40								
			TD	1100	058		3510	276		00058	42	1355	149	29								
	121	OB		1136	056		35103	2770					149	27								
			TD	1200	053		3509	2773		00053		1411	149									
	121	08 08	TD	1300	049		3507	2776		00050	02	1463	149									
	121	UE	J	T1390	046	۲.	35032	2776	1				149	20								

REFERENCE	SHIP				_ = N	RSDEN	STATION TI			ORIGIP	ATOR"	5	OEPTH	MAX		WAVE	WEA	CLOUD			NODC
CTAY IO.	CODE	LATITU	1/10	ONGITUDE '1/10	۵۶۱	O' 10	MO OAY H		EAR		STATIO IBM UN		TO BOTTOM	OF S'MPL	001	HGT PER 3	THER	CODE		5	TATION
311262	ME	3458	9N 0	47586W	1:	13 47	04 14 1	20 19	968	E10 00	3		3840	15	12		2 X1	4 5			0003
						WA		ONIV	BARO-	AIR TE	MP. °C	VIS.	NO.	5.06	CIAL						
						COLOR	TRANS. OIR.	SPEED	METER (mbs)	ORY BULB	W E1	COD	OBS. DEPTHS		/A TIONS						
						-	12	515		206	-	-	-								
ſ							12	315	227	206	19		14					,			
	MESSENGII TIME	CAST	CARD	DEPTH 6	n)	1 10	5 %.	SIGMA	-1 :	PECIPIC VOL	ME	E A D	SOL		O 2 ml/1	PO4-P	TOTAL-F	NO2-N	NO3-N	\$104-5	ρΗ
	HR 3/10	1 40.	1776							ANUMALT-I	10'	x 103	. AFFC	CITY		µg = 01/1	μg · e1/l	µg - □1/1	yg - 61/1	yg = at/l	
									Ì												
'		. ,	STO	0000	) '	1855	3640	2623	3 ່	001801	в '	0000	15:	197 ˈ			•	1	'	ı	1
	120	)	OBS	0000		1855	36403	2623	3				151	197							
			STD			1828	3640	2629	9	001740	7	0018	15	191							
			STD			1806	3640	2639		001691	2	0035									
	120	,	OBS	0026		1796	36404	2637					151								
			510			1792	3640	2638		001661		0052									
			STD			1774	3640	2643		001628	5 1	0085		-							
	120	1	OBS	0051		1773	36401	2643					151								
	120		STD			1762	3642	264		001593	0 (	125									
	120		085 ST0	0077		1761	36425	2648					151								
	120		085	0101		1748 1747	3639 36390	2648		001591	4 1	0165									
	120		510			1734	3637	2648 2650		001584		0204	151								
			510			1720	3634	2651		001584		)244 )244									
	120		085	0151		1719	36342	2652		001576		2 4 4	151								
			STD			1735	3641	2653		001582	R	323									
	120	ı	085	T0202		1736	36416	2653		001)62	0 '	3323	151								
			STD			1704	3634	265		001577	7 (	0402									
			STD			1662	3626	2659		001555		0480									
	120		085	10395	i	1556	36080	2670					151								
			SID	0400	)	1548	3607	2671		001470	1 (	0632									
	120		OBS	0497		1406	35866	2686	5				151								
			STO			1403	3586	2686	, 1	001341	8 (	772									
	120		OBS	T0593		1298	35709	2696					151	114							
			510			1284	3569	2698		001250		902		110							
	0		STO			1095	3540	2711		001123	5	1050									
	120		OBS	0792		0942	35221	2724					150								
			STD			0929	3522	2726		000982		1126									
	120		STD			0785	3517	2745		008000	9	1215									
	120		OBS	10994		0675	35130	2758		000110			149								
			51D 510			0670 0594	3513	2758		000669		1288									
			5 T D			0532	3510 350 <b>7</b>	2766 2771		000594		1352									
	120		085	1255		0504	3507	2773		000541	۷ .	408									
	1.0		510			0484	3504	2775		000508		461	149								
			SID			0451	3501	2776		000508		511	149								
			STD	1500		0433	3499	2776		000496		1561	149								
	120		085	T1519		0431	34986	2776					149								

REFERENCE	SHIP					E.F.	MAI	SDEN HARE	51	ATION	TIME	1			ORIGIN	ATOR'S		DEPT	H L	A A X		WAV			₩EA-	CLC	UO		,	400C
CODE NO.	CONE	LATITU	DE 1/10	LON	GITUDE 1/10	PER	10.		W0	DAY		_	EAR	CRUISI		STATION NUMBE		Q7 DTFOR		OF WPL'S	0.0	SERVA THGT			THER	TTPL				'ATION UMBER
311262	ME	3509		04	7527W	-	113		_	+	146	+	968	E10	+			374				HG!		-	X 1	4				0004
1 311202	1 314	3509	214	04	()2 (W	ì	1113	WA	_	120	WIND		700		AIR TE					16	10	,[-]	'	2	V 1	4	1 1			JU U 4
								CDLDR	-	M 5	528	EED	BARC	)- <u> </u>	DRY	WET	VIS	DBS		SPEC	IAL ATIONS									
								CODE				RCE.	[mba		8UL8	BULB	1200	DEPT	HS	926×41	THOMS									
										14	51	7	22	7 2	06	206	7	14	- 1											
	MESSENGE	CALL					T				1				c volt		5 A D	Ή.	******	_		1					Т			
	11001	NO.	CAI		DEPTH	(m)		70		5 * 4.	5	IGM A	1-1		A & ( T - 2 1	0,1	E △ D NN. M 1 10 <sup>3</sup>	V	ELDCI SDUNI		02 mi/		)4≈₽ • at l		TA L=P	NO2-		NO3-4 pg - obil	\$1 04-5: pg - ot/1	ρН
	HR 1/10	+	_	-		_	+									-	X .V	_		-		+		-			+			
			٠ .	то	000	0	Ι,	816	1	637	1 2	62	ا	00.1	736	2 1	000	Ι,	518	14							- 1			
	146		08:		000			816		6365		62		001	. 136	2	,000		518											
	140	,		T D	001			789		637		636		001	674	5 (	017		518											
				TD	002			767		637		64			625		034		517											
	146	,	08		002			757		6369		64							517											
			S	T D	003	Ú	1	749	3	637	2	64	6	001	587	9 (	050	1	517	71										
				T D	005		1	1726	3	636	2	65	1	001	548	1 (	081	1	516	8										
	146	•	083		005			1726		6358		65							516											
				TD	007			719		634		65		001	.552	8 (	120		517											
	146	,	08		007			1719		6341		65							517											
				TO.	010			718		636		65		001	547	4 (	158	_	517											
	146	)	OB:		010			1718		6357		65		001					517											
				TO TD	012 015			1719 1 <b>719</b>		636 636		65: 65:			.554 !564		)197 )236	_	517											
	146		08:		015			719		6361		65		001	. 204	) (	1230		518											
	140	,		To	020			719		636		65		001	578	2 0	315		519											
	146	,	08:		1020			719		6364		265			. , , ,		, , , ,		519											
				TO	025			673		628		651		001	550	0 0	393		518											
			S	TD	030		1	621		619		66		001	513	7 (	470	1	517	75										
			S	TD	040	0	1	511	3	601	2	67	4	001	432	9 (	617	1	515	55										
	146	,	00	S	T041	1		498		5990	2	67	6						515	3										
				TD	050			387		582		68		001	337	6 (	755		513											
	146	,	08	_	050			380		5813	_	68							512											
				TO	060			1298		572		69		001	254	8 (	885		511											
	146		OB:		T060 070			1296 1081		5720 544		69		003	068	, .	001		511											
				T D T D	080			905		544 525		271 273			919		1001		.505 .500											
	146		08		080			897		5242		73		000	, , 1 7	· ·	101		500											
	. 40	•		T D	090			782		521		74		000	766	9 .	185		497											
				TO	100			684		518		76			653		256		495											
	146	5	08		T101			674		5175		76				-			494											
				TD	110			624		515		76		000	0601	2	319		494											
				TO	120			573		512		77			562		377		494	+0										
	146	5	OB:	S	128	1	(	536	3	5093	2	77	3					1	493	38										
				TO	130			528		509		277			532		432		493											
				70	140			)489		506		277			511		1484		493											
				TO	150			456		503	_	277		000	498	5	1535		494											
	146	5	OB:	S	T156	3	(	438	3	5011	. 2	277	8					1	491	44										

REFERENCE		LONGITUDE 3	MARSDEN	STATION TO	ME YEAR	ORIGINATE		DEPTH DEPT	H OBSE	WAVE RVATIONS	WEA	CLOUC			NODC	
CODE NO. CODE	LATITUDE 1/10	LONGITUDE 1/1/10	10, 1,	MO OAY H			TION ABER	BOTTOM S'MP	1	HGT PER SI	0000				UMBER	
311262 ME 3		047599W	+ - +		78 1968	E10 005		4590 1	7 12		2 X1	6 1			0005	
311202  ML   -	7433011	041277	WAI		IND	A IQ TEAAP	*0									
			COLOR		SPEED MET	ER DRY V	VET CODE	OBS. OBS	VATIONS							
			CODE	Im I	FORCE (mb		ULB	DEPTHS OFF								
				12	513   17	9 206 1	94 7	14								_
MESSENGA	CAST CARC		1 .	1		SPECIFIC VOLUME	₹ ∆ o M MYO	SOUNG		PO4-P	TOTAL-P	NO2-N	NO3-N	SI Ci4-Si		S
TIME ar	NO. TYPE		1 °C	s ·/	SIGMA-T	ANOMALY-X107	X 103	. AEFOCITA	O 2 ml/l	pg = a1/1	µg = a1/1	ug = at/1	μg - σt/l	µg - at/l	рН	Š C
HR 1/10			-	+	1		1	_				-				П
	ST	0000	1900	3640	2611	0019153	0000	15210	I	1	1	1	1	1	1	1.
178	OBS	0000	1900	36397	2611			15210								
•	5 T		1896	3640	2612	0019062	0019	15211								
	ST	0020	1892	3640	2613	0018971	0038	15211								
178	085	0024	1890	36405	2614			15211								
	ST		1870	3640	2619	0018481	0056									
	ST		1812	3640	2633	0017182	0092	15193								
178	OBS	0052	1807	36401	2634	0011		15192								
	ST.		1759	3636	2643	0016323	0134	15182								
178	OBS	0079	1754	36357	2644	001(001	0174	15181								
170	ST		1743	3635 36353	2647 2647	0016081	0174	15181 15181								
178	OBS	0106 D 0125	1741 1744	3640	2650	0015859	0214	15186								
	ST ST		1744	3643	2651	0015818	0254	15192								
178	0BS		1750	36433	2651	0013010	0224	15194								
170	ST		1729	3637	2652	0015946	0333									
178	OBS		1720	36351	2652			15193								
•	ST		1702	3632	2654	0015870	0413	15193								
	ST	D 0300	1668	3627	2658	0015660	0492									
	ST	D 0400	1577	3612	2668	0014993	0645									
178	OBS		1527	36038	2673			15168								
	ST		1452	3591	2680	0014089	0790									
178	OBS		1380	35800	2686			15135								
	ST		1304	3569	2694	0012893	0925	15117 15090								
178	OBS		1200 1099	35561 3545	2704 2715	0010922	1044									
	ST S <b>T</b>		0873	3523	2736	0010922	1143									
178	OBS		0728	35103	2748	000020	11.5	14948								
110	ST		0711	3510	2750	0007385	1224	14944								
	s T	_	0616	3507	2761	0006314	1293	14923								
	\$T	D 1100	0543	3506	2769	0005554	1352	14910								
178	OBS		0539	35054	2769			14910								
	SI		0504	3504	2772	0005241	1406									
	ST		0473	3503	2775	0005016	1457									
178	OBS		0453	35022	2777	000.0-		14921								
	51		0450	3502	2777	0004871	1507									
120	ST		0435	3502	2778 2779	0004794	1555	14932 14956								
178	OBS	T1668	0425	35013	2119			14770								

ID. CODE	LATITUDE 1/10	LONG	ITUDE 11/10	MARSDEN SOUARE	STATION TO	YEAR	CRUISE 5	ATTIONS TAT ON NE BER	DEPTH DEPTH TO DEPTH BOTTOW STAR		AANE SERVATION				51A1 51A1 N.C. 8	TIN FBFR
262 ME	35558N	048	003W	113 58		19 1968	F10 00	6	4499 43	15	1	2 X8	6 6		0.0	106
				WA		-INID						2 110	0 0			, , ,
				COLOR	TRANS. D.R.	SPEED METER			N SP	ETIAL VATIONS						
				CODE	IMI UIA.	FORCE (mbs)	BULB	BUL8	DEPTHS DESER							
					15	509 176	194	194 5	10							
MESSENGE	C. 137	eD.		1	1		SMES FIS VOLU	u. 3 _ 0	SOLNO					-		
MESSEN GR	P NO. T	PE	DEPTH (m)	7 °C	2	SIG M A - T	ANDMA,T-1		₹ ELOCITY	2: m		101A (=)		NC,-N		÷ ~
HR 1/10		-		+	+	-			<del></del>			+	· —	-		
		TD	0000	1842	3636	2622	001803	9 0000	15193							
119			0000	1842	36358	2622	001803	4 (1000								
117			0010	1817	3636	2622 2629	0017/2	1 0017	15193							
		TD TD	0020	1797	3637		001743									
119			0024	1790		2626	001048	6 0034								
114			0024	1782	36368 3637		001667		15182							
119		TD.	0049	1764	36360		001667	6 0051								
119			0050	1764		2642	001422	0 0000	15179							
119		TD	0050	1752	3636	2642	001632	8 0084								
119					36362	2645	001/10	2 0135	15179							
110		ID	0075 0098	1753	3637	2645	001613	2 0125								
119				1760	36426	2648	001600	0 01/5	15186							
		TD	0100	1759	3642		001593									
110		T D	0125	1749	3541	2649	001590	5 0205								
119			0148	1740	36394	2650	001507	0 0015	15188							
		TD	0150	1739	3639	2650	001587	9 0245								
119			10198	1720	36356	2652	201505		15190							
		TD	0200	1719	3635		001585									
	_	ID	0250	1685	3630	2657	001562									
119		ID	0300 10395	1645 1549	3624 36072	2661	001534	3 0480								
119			0400			2671	001///		15167							
110		TD	0494	1543	3606 35844	2671	001466	5 0630	15166 15140							
119		TD.	0500	1422 1416	35844	2681 2682	001386	1 0771								
110		-		1295	-		001300	1 0773								
119			T0595		35677	2695	001074		15113							
	_	TD	0600	1286	3566	2695	001274									
		TD	3700	1098	3529	2710	001135	0 1126								
119			0792	0930	35239	2728	000011		15011							
		TD	0800	0913	3523	2730	000944									
		TD	0900	0731	3518	2754	000707	7 1213								
119			T0922 1000	0698 0644	35172 3514	2758	000625	9 1279	14944							
		ID ID	1100	0583	3514	2762 2767	000580									
		TD	1200	0533	3510	2771	000545									
119			1244	0514	35054	2772	000545	7 1346	14923							
119		TD.	1300	0497	3504	2773	000523	6 1449								
		TD	1400	0468	3503	2775	000508									
		TD	1500	0444	3501	2777	000494									
119			T1502	0444	35013	2777	000474	) 1)))	14936							
119		TD	1750	0410	35013	2780	000476	3 1672								
148			T1953	0386	34999	2782	000410	2 10/2	14988							
140		TO	2000	0381	3500	2782	000465	0 1790								
148			2454	0337	34969	2785	000409	0 1740	15053							
140		TD .	2500	0333	3497	2785	000456	6 2021								
148			12952	0300	34943	2786	000436	0 2021	15122							
140		TO	3000	0295	34743	2786	000450	2 2247								
			4000	0233	3490	2789	000430									
	2	TD	# U U U	U Z J J	J 🕶 🔻 🔾	2104	000431	2000	11210							
148		c	4191	0229	34893	2788			15308							

ID.	SHIP	LATITUI	DE 1/10	LONGITU	DE PRES	MARSI SQUA	RE	STATION (GMT		YEAR	CPUISE NO.	RIGINAT STA NU	OR'S TION MBER	DEPTH TO EOTTO	DEFI	H 081	WAVE SERVATIO		WEA- THER CODE	CLOUD CODES		51	NODC ATION UMBER	
262	ME	3500		04800		113				1968	E10	007		4206	15	29	2 2		X1	3 6			0007	
202	ME	3,000	014	04000			WA!	TRANS DIR	WIND SPEED OR FORCE	BAR MET	O- AI ER DI a) BU	R TEMP	WET COD	NO.	SP	ECIAL VATIONS	1- 1-				1	,		
,								16	504	14	6 21			1 "				1						
	MESSENGR TIME HR_1/10	CAST OF ND.	CARE		PTH (m)	ī	℃	s ·4.	\$1G	MA-1	SPECIFIC	VOLUME LY-X107	≱ △ C DYN, A x 10 <sup>3</sup>	s. SC	LOCITY	O <sub>2</sub> ml/	PO4-		TA L-P	NO2-N µg - al/1	NO3=N µg - at/l	SI O4=St µg - a1/I	рΗ	000
1	1.63	,	ST OBS		0000		349 349	3635 36349	26 26		0018	3266	0000		195		ı		I					
	163	,	ST		010		344	3635	26		0018	8189	0018		195									
			ST	_	020		339	3635	26		0018		0036		196									
	163	3	OBS	-	0024		337	36347							196									
			ŞΤ		030	18	312	3635	26	29	0017	7482	0054	15	189									
			ST	D C	050	1	758	3637	26	44	0016	5172	0088		177									
	163	3	OBS		050		758	36365							177									
			SI	_	075		759	3637	26		0016	5245	0128		182									
	163	3	OBS		075		759	36370			0017		03//		182									
			ST	_	100		736	3634	26		0015	5984	0169		5179									
	163	5	OBS		100		736 742	36344 3638	26 26		0015	504.7	0209		5185									
	163		ST OBS		)125 )149		744	36406		50	001,	7 7 4 1	020		5190									
	163	,	ST		150		744	3641		50	0015	5890	0248		190									
	163	3	085	_	1199		734	36393		52	001	,,,,	02 11		195									
	10.	,	51		200		734	3639		52	0019	5942	0328		5195									
			ST	-	250		709	3634		54	0015	5892	0408	3 19	5195									
			ST		300	16	574	3628	26	58	0015	5686	0486	15	5192									
	163	3	08.5	<b>T</b> (	395	1 5	576	36114	26	68					5176									
			ST	D 0	0400		569	3610		68	0014	4946	0640		5175									
	163	3	OBS		1492		434	35891		82					5144									
			51	_	500		424	3587		83	0013	3785	078		5142									
	163	3	OBS		1590		292	35678		95	001:	2522	001		5111									
			51		0000		271	3565 3539		97 15	0012		091		5050									
	165		51 089	_	0700 0 <b>784</b>		073 925	35238		28	0010	0 90 0	103		5008									
	163	,	57		0800		929 897	3522		31	0009	9284	113	-	5000									
			51	_	900		742	3514		49		7557	121		4957									
	163	3	08.9		978		649	3509		59			•		4933									
	10.		51		1000		633	3509	-	60	0000	6442	128		4930									
			51	_	1100		569	3507	27	67	000	5807	134		4921									
			51	D	1200	0	520	3506		72	000	5319	140		4918									
	16	3	085		1225		510	3505		73					4918									
			51		1300		486	3505		76		5009	145		4920									
			51		1400		467	3505		78	0004	4864	150	-	4929									
	16	3	083	5 T	1484	0.	462	3505	2 27	78				1	4941									

																_											
REFERENCE	SHI					- 5	MAR	SOEN	STA	ION T	IME	ur.			INAT	OR"S		DEPTH	DEPTH		WAV SERVAT		WEA-				NODC
.00 NO.	cot		LATITUD	- 1	LONGITUDE	MOC	sou			(GMT)	10.1/1-	YEAR	C	NO.		TION		O1 MOTFOB	OF S'MPL			ER SE	CODE	THELAM			TATION UMBER
	+	-		1/10	1/10	ļ-	10*	1.			R.1/10			_		* · · · · ·				_	1	_	-	1-1-			0000
311262	2  ME	=   3	35007	N	047 <b>59</b> 3₩		113		- 1	-	178	196	8   1		08	bo 1	_1;	4206	15	19	2   5		X 1	8 6	1		8 000
								WA	_	+	SPEE		RO-	_	TEMP.	_	VIS.	NO. OBS.	591	ECIAL							
								COLOR	TRANS	DIR,	FORC		TER bil	ORY BULS		V ET	CODE	DEPTHS	OBSER	VATIONS							
									+-	20	508		35	222	<del></del>	11	8	14			1						
	_						_	<u> </u>	4	20	300				1	_		النبا							T		T
	MESS	ENGE	CAST	CARC	DEPTH	(m.)	1	℃	5		SIG	I+AM		PECIFIC VO		. S	A D.	VETO 200		02 ml/		4-P	TOTAL-P	NO2-N	NO3-N		рн
		1/10	NO.	TYPE										AROMAL,		x	103	VELO	CIII		vg.	- 01/1	μg - ο1/1	μg - σ1/1	µg = a1/1	yg - 01/1	
																						- 1			ĺ		ļ
	1		,	ST	D 000	0	1	941	36	29		92	. (	00209	07	00	00	152			,						
	;	178		OBS			_	941		294		92						152									
				ŞΤ				880	36			14		00188			20	152									
				ST				833	36			30	- 1	00173	66	0.0	38	151									
	:	178		OBS				825		440		533						151									
				ST				807	36			38	-	00167	02	0.0	55	151									
		178		OBS				778		443		545		00160	72	0.0	88	151 151									
				ST			_	778	36			545		00160	113	00	8 8	151									
		178		OBS				773 773	36	449		547 547		00159	102	0.1	28	151									
		. 70		ST				768		45 460		549		00135	72	0 1	. 2 0	151									
		178		ST			_	766	36	-		549		00158	141	0.1	68	151									
				ST			_	755	36			550		00158	_		207	151									
		178		OBS				749		432		551						151									
				ST	_		_	749	36			551		00158	311	0.2	47										
		178		OBS			1	749		441		552						152	200								
				ST			1	748	36	44		552		00159	902	03	326	152	200								
				ST	D 025	0	1	717	36	44	26	559		00153	358	04	04	15	199								
				ST	D 030	0	1	687	36	39	26	663		00151	177	0.4	81	15	197								
		178		OBS	T038	9	1	632	36	228	26	563						15	194								
				ST			-	606		18		666		00151	191	06	32		187								
		178		OBS				441		913		682							146								
				ST			_	430		90		684		00136	593	0	777										
		178		OBS			_	340		765		692		0012			200		127								
				ST				308		71		694		00128		_	909		119								
		170		ST				117		44		711 722		00111	1 50	1,	30		030								
		178		OBS				1935		298 27		729		0009	561	1 '	135		015								
				ST ST				771	_	17		747		0007			222		969								
		178		085	-			690		128		755		0001		1.			947								
		110		ST				671		12		758		0006	753	1.2	294		946								
				s T				618		11		764		0006		-	359	_	941								
				ST				566		10		770		0005	_	_	418		937								
		178		085				559		102		771						14	936								
				ST			C	516	35	08	2	774		0005	234	1	473	14	933								
				ST		0	0	468	35	04	2	777		0004	973	1	524		930								
		178		OBS	T146	2		438	3 5	014	. 2	778						14	927								

ENCE SHIP		- E	MARSDEN	STATION TIA	4E YEAR	ORIGINA		DEPTH	MAX. DEPTH		WAVE ERVATIONS	WEA-	CLOUD			ODC
ID. CODE	1/16 LOF	ACHINDE PO	1 1	MO DAY HE		CRUISE ST	A TION UMBER	MOTTOM	OF S'MPL'S		HGT PER SE	CODS	TYPL AM	1		UMBEI
		8019W			34 1968	E10 009		3977	15	12	1	x 6	6 2		(	000
	,	, ,	WAT	ER W	ND BA		VII.	NO.	SPEC	IAL						
			COLOR	TRANS. DIR.	SPEED ME OR FORCE (m		WET COD	OBS. DEPTHS	OBSERV	TIONS						
				13	514 1	5 194	194 6	14								
MESSENGR CA	ST CARD TYPE	DEPTH (m)	1 %	s */	SIGMA-T	SPECIFIC VOLUE	A! ₹ △ D DYN. M X 10 <sup>3</sup>	SOL		02 ml/l	PO4-P µg = 01/1	101AL-P 41/10 - gu	NO3-N vg - al/l	NO3~N µg - α9/l	\$1 O4-\$1 ug - a1/1	ph
													ļ		1	
	STO	0000	1896	3633	2606	0019548	0000									
134	OBS	0000	1896	36329	2606	001000	0030	157								
	STO	0010	1879	3634	2612	001909										
	SID	0020	1857	3635	2618	001852	0038		198							
134	OBS	0024	1846	36356	2621	0017599	0056		190							
	STD	0030	1820	3636	2628	001759	, 0056		180							
134	OBS	0047	1768	36379 3638	2642 2643	001625	0090		180							
	STD	0050 0075	1766 1751	3639	2647	001523			180							
101	STD		1750	36390	2648	001371	0100		179							
134	0BS	0076 0095		36367	2649				178							
134	OBS		1737 1737	3637	2649	001582	3 0170		179							
	SID	0100	1740	3640	2651	001574			185							
126	STD OBS	0125 0142	1740	36405	2651	001514	020.		188							
134	STO	0150	1741	3640	2651	001583	4 0249		189							
134	OBS	T0195	1735	36399	2652	001000			195							
134	SID	0200	1734	3639	2652	001592	0328		195							
	STD	0250	1713	3633	2652	001607			196							
	STD	0300	1680	3626	2655	001594			194							
134	OBS	0385	1597	36154	2666			15	181							
134	STO	0400	1576	3612	2668	001495	6 0643	3 15	177							
134	OBS	0481	1461	35923	2679			15	152							
	STO	0500	1436	3589	2682	001389	2 078	7 15	146							
134	OBS	T0583	1318	35718	2693				119							
	SID	0600	1285	3567	2696	001266			110							
	STD	0700	1100	3542	2712	001118	2 1039		060							
134	OBS	0778	0970	35286	2725				024							
	SID	0800	0932	3527	2730	000951			014							
	STD	0900	0782	3521	2749	000766	9 122		973							
134	OBS	T0980	0686	35166	2759				949							
	STO	1000	0671	3516	2761	000648			946							
	STO	1100	0603	3512	2766	000592			935							
	STO	1200	0546	3508	2770	000553	5 141		928							
134	OBS	1242	0525	35068	2772				927							
	SID	1300	0500	3506	2774	000518	_		926							
	SID	1400	0466	3503	2776	000498		_	929							
	STO	1500	0443	3501	2777	000493	8 157		936							
134	OBS	T1506	0442	35011	2777			14	936							

REFERENCE	SHIP	LATITUDE	1000000	i i	MAR	SDEN	STAT	ION T	IME			ORIGIN	ATDR'S		DEPTH	MAY,	Ī	WA	- ∨E		WEA-	CLOUD			
DE NO.	CODE	1/10	LONGITUDI			I ARE		IG M TI	4R, 1, 10	YEAR	CRUISE NO.		STATION		TO	DEPTH		BSERV	'A TION!		THER	CODES	1	5	NODC TATION
311262	2 ME	35062N	047525		113	57		-		1968		01		-	3560	2,Wbf.2	23	-	T PER S	-		TYPI A.M	7		UMBER
				'	1	WA			WIND		-	AIR TE	-			10	23	, I	1 1	2	X 1	4 6	1		0010
						COLOR	TRANS.	DIR.	SPEED	14.61	ER .	DRY	WET	VIS.	NO, OBS. DEPTHS	SPEC DBSERV		5							
								24	512	04		94	178	7	14		_	-							
	MESSENGR TIME HR 1/10	OF NO TY		H imi	r	*c	5	٠	SIG.	MA-T		VOLU ALY-X1	67 [	∆ D YN M X 10 <sup>3</sup>	SOU		O 2 ml.		PD4-P		TA L = P	ND7=N +g + al/l	NO3-N P0 - 01/1	SI O 4-Si ug - a1/I	рН
		1	TD 00	0.0	Ι,	896	364	. 2	26	1.0	20.1	000		000											1
	111				_	896	364		26		001	889	9 0	000	152										
			TD 00			873	364		26.		001	820	2 0	010	152										
			TD 00			849	364		26		001			019 037	152 152										
	111					834	364		26		551	,	. 0	ارن	151										
		S	TD 00	30		819	364		26		001	692	2 0	054	151										
		S	TD 00	50	1	766	364	6	26		001			086	151										
	111			51	1	764	364	65	26				- 0	000	151										
			TD 00	75	1	759	364	.7	26	51	001	555	7 0	126	151										
	111			77	1	759	364	66	26	51					151										
			TD 010		1.	756	364	6	269	52	001	5583	3 0	164	151										
	111		_			756	364	64	265	5.2					151										
			TD 01:			755	364		265		001			203	151	90									
	1		TD 01			753	364		265		001	5699	9 0	243	151	93									
	111					753	364		26!						151	94									
	111		D 020			752	364		265		0019	5848	3 0	321	152										
	111	0B:	-			751	364		265						152										
		5				738	364		265		0015			401	152										
		5				709	363		265		0019			480	152										
	111					04 89	361		266		0019	219	9 0	636	151										
	- 1 1	51				30	361 358		266		001	20.			151	-									
	111	OB S				104	357		267		0014	+201	. 0	783	151										
		51				104	357		268 269		0012	00.0			151										
	111	083	_			79	356		269		0012	049	0	918	151										
	-	SI				50	355		270		0011	522	. 1	140	151										
		51				96	353		272		0010			148	150 150										
	111	OBS	083	12		49	352		272		0010	100	1	0	150										
		51	D 090	0		51	352		273		0008	783	1:	243	149										
		51	D 100	0.0		14	351		275		0007			124	149										
	111	OBS		0		62	351		276			20,	4.		149										
	111	<b>*</b> ST	D 130	7	0.5	31	351		277		0005	175	۱,	15	1494										
	111	*5T	D 156	0	0.4	24	3500		277		0004				4 7 7 7	7.1									

T			Crono	CA.	W E	AVE	1	MAX.	РΤΗ	0	\$	INATOR'	ORIGI	l	-	IME	ON II	STATIC	DEN 1	MARS	F #		1			CHIO	NCE	FERE	N.E.
STAT			CODES	ER	THE	VATIONS	0826	DEPTH	0	1	IN	STATIC	RUISE				SMII	(G	ARE	SQU.	PRUFT	NGITUDE			LATITU	CDDE	10. NO.	Y	CTR
NUM			TYPE AMT	DE	COL	GT FER SE	DIA.	S'MPL'S	UM	100	E R	NUMB	NO.	$\rightarrow$		(R,1/10			1	10*	+	1770		1/1			-	+-	-
00				0	2   XC	2	22	16	72	45		11		68 E		_	_		-	113	1	7550W	1 04	5N	3456	ME	262	11	3
							AL	SPECI	j.		VIC	TEMP. T		BARO-		SPEED	- W	_	WAT	}									
								OBSERVA	IS. THS	5 E	1     COD	BUL	BULB	METER {mbal	€ U	FORC	OIR.	TRANS (m)	COUL										
							_		,	1	$\rightarrow$	-	194	017	-	515	22			-									
				_					•	٠,		1	174	011		1313	2.2							_			г		
12-4	SFO	NO3-N	NO2-N	- P	TOTAL-	PO4-P	) g ml l		sou	о м.	₹ △ D		ECIFIC VOL		IGMA-	SIG	٠	s -	*C	t	(m.)	OEPTH	CARO	0	CAST	MESSENGR TIME d			
- at/I	¥8 −	μg = 01/1	ug = qt/	1/1	¥g - 61/	µg + 61,11	•	SITY	VELO		x 10 <sup>3</sup>	-179	NOMALT-										1176	_	110.	HR 1/10	- 1		
				1																									
		1				,		07	152	ֹ נ	0000	38	01943	C	608	26	3	3633	893	18	0	000	STD				,		
								07	152						608			3633	893			000	BS			096			
								09	152	9	0019		01899		613			3631	890			001	SID						
									152	3	0038	58	01865	C	617			3643	887			002	STD			0.07			
									152						619			3649	884			002	BS			096			
									152		0056		01818		622			364	372			003	STD						
									151	I	0091	19	01607	C	645			364	781			005	STD BS			096			
									151				01566		648			3649	768			007				096			
									151	J	0130	9.1	01566		650 651			3646	762 761			008	STD BS			096			
									151	,	0170	<b>E</b> 0	01565		651			3647	760			010	STD			0 9 0			
									151 151	,	0170	50	01565		651			3646	759			011	BS			096			
									151		0209	4.0	01574	0	651			3646	758			012	STD			0,0			
									151		0248		01575		652			3646	755			015	STD						
									51	,	0240	,,	01717		651			3645	754			016	85			096			
									152	7	0327	51	01595	C	652			3645	753			0200	STD						
									152					-	652			3644	749			T022	BS	01		096			
									52	5	0406	48	01564	0	656		4	3644	730	1.7	0	0250	STD	:					
									52		0484		01523		662	26		3641	595	1€	0	0300	STD						
								94	51	5	0635	39	01513	0	667	26	5	3625	526	1 €	0	0400	STD						
								91	51						665	26	57	3615	00	1€		T0438	BS			096			
								61	51		0784	67	01446	0	676	26	4	3594	80			0500	SID						
								38	51						684			3579	391			054	BS			096			
									51		0920	71	01287	0	694		-	3565	88			0600	STO						
									50						703			3552	191			T065	BS			096			
								-	50		1041		01121		712			3549	29			0700	STD						
									50		1145	38	00963	0	729			3540	94			0800	STD			001			
									.50				0000	_	741			3534	397			0873	BS			096			
									.50		1233		00804		746			3532 3523	355 718			1000	STD						
									49		1307	90	00669	O	759 768			3516	20			T109	BS			096			
									49		1260	0.3	00579	0	768			3516	14			1100	STD			0,0			
									49		1369 1425		00540		772			3511	552			1200	STD						
									49		1423 1478		00511		775			3507	02			1300	STD						
									49		0	• •	-0711		776			3504	74			1368	BS			096			
									49		1528	04	00490	0	777			3504	63			1400	STD			. •			
									49				00478		778			3502		04		1500	STD						
											1576	54	UU4 / H	U	110	21		300/	- 00										

€ 5.	SHIP	LATITU		LONGITUDE	MAR SQU	ARE	STATION	AT)	YEAR	0.70	321	ATOR'S	N	DEPTH TO BOTTON	DEPTH		WAVE SEP / A TIUN		THER	CLO			NODC TATICN UNBER	
٥.	-		1:10	1/10	= 10.	1.	MO DAT	HR,17	10	N	0.	NUMBE	R		, Z, W bf.	5 019	HGT PER	SEA		TYPI A U		N	OWNER	4
62	ME	3330	14N	046312W	113	36	04 23	158	196	8 E	10 01	2		3932	15	20		3	x 2	4 8			0012	
						WA	TER	WIND	8.4	ARC-	AIR TE	MP 🕾	Τ.	NO.										
						COLOR			EED AA	ETER	DRY	WET		DEPTHS	Occes.	CIAL								
						CODE	(m)	FC	PCE I	nbs?	BULB	BULE		DEFINS										
							1	9 51	6 0	68	206	18	3 7	14										
	MESSENGR TIME HR 1/10	CAST NO.	CARE		) T	₹	5 .	.	iigma=1	SPEC	CIFIC VOLU	I AN E	₹ Δ D DYN. M x 10 <sup>3</sup>	SO VEL	UND	O <sub>2</sub> ml	PO4-P			1102=N 1102=N	NO3-N µg - al'I	\$154-\$ ug + 01	рН	
ł			ST	0000	1 2	037	3655	- 1	586	0.0	2145	1 (	0000	15	250			İ					1	
	158	2	OBS	0000	_	037	3655		2586	00	22172		3000		250									
	100		ST			035	3655		587	0.0	2144	7 (	0021		251									
			ST		_	033	3655	-	587		02143		0043		252									
	158	3	OBS	0026		032	3655	_	588	50	140	,	5075		252									
		-	ST			008	3653	-	592	0.0	2098	5 (	0064		246									
			ST		_	915	3648		613		1912		0104		223									
	158	3	085	0050		915	3647		2613		. 1 . 1 2		J 1 0 <del>4</del>		223									
			ST		-	864	3648		2626	0.0	1795	8 (	0151		213									
	158	3	OBS	0076	_	862	3647		626				0101		213									
		-	ST		_	834	3646		2632	0.0	1746	1 (	0195		209									
	158	3	OBS	0100		834	3645	_	632				01,5		209									
			SI	_		819	3646		636	0.0	1718	2 (	0238		208									
			ST			807	3646		639		1698		281		209									
	158	3	OBS	0150	1	807	3646	0 2	639						209									
			ST	0200	1	795	3648		643	0.0	1673	1 (	365		214									
	158	3	OBS	T0201	1	795	3648		644						214									
			ST		1	782	3647		646	00	1666	1 (	0449		218									
			ST	0300	1	755	3644		650		1641		0531		218									
	158	3	OBS	T0394	1	662	3628		660		_				204									
			ST	0400	1	653	3626	2	661	00	1567	6 (	0692		202									
	158	3	085	0491	1	511	3601	0 2	674					15	170									
			ST	0500	1	499	3599	2	675	00	1451	5 (	3843	15	168									
	158	3	065	T0590	1	358	3577	4 2	689					15	134									
			51	0600	1	332	3574	2	692	00	1310	4 (	981	15	127									
			ST	0700	1	098	3543	2	713	00	1107	2	1102	15	059									
	158	3	OBS	0783	0	939	3525	3 2	727					15	013									
			5 T	0800	0	912	3524	2	731	00	00939	0 :	1204	15	006									
			ST	0900	0	773	3516	2	746	0.0	0789	3	1290	14	969									
	158	3	OBS	T0978	0	688	3512	6 2	756					14	949									
			ST	1000	0	674	3513	2	758	0.0	0677	6	1364		947									
			ST	1100	0	615	3513	2	766	0.0	00600	5	1428	14	940									
			ST	1200	0	567	3514	2	772	00	0540	9 1	1485	14	938									
	158	3	OBS	1235	0	553	3514	0 2	774					14	938									
			ST		0	530	3514	2	777	00	0499	2 1	1537	14	939									
			ST	1400	0	503	3513	2	780	0.0	0480	1 1	1586	14	945									
			ST	1500	0	486	3511	2	780	00	0479	0 1	1634	14	955									
	158	3	OBS	T1500	0	486	3511	4 2	780					14	955									

FERENCE	SHIP				GITUDE	DRUFT	MAR		STA	TION	TIME	YE A			GINAT			DEPTH	MAX. DEPTH		W	A VE	2015	WEA		CLOUD		,	NODC
ID.	CODE	LATITU	1/10		1/10	200	10*	- 1	MO		HR,1/10	11.01	`	NO.		MRER	- 1	MOTTON	S'MPL"			GT PER		1 cor		YPE AMT			UMBE
+	145	2227		04.4	501 W	1	113	-	04	_	118	196	a	E10	012			4298	15		5	1	3			8 2			001
11262	ME	3334	i Ni	046	OOI W	1 1	113	WA		-	WIND	_		Δ.10	TEMP	°C.				_	<u> </u>	1	-	" "	'	0 12		1	
								COLOR	_	-	SPEE	0 14	A PO- ETER	-		WET	VIS CODE	NO, OBS.	SPE OBSERV	CIAL	M C								
								CODE	(m)	S. DIR.	FOR		mbs)			ULA		DEPTHS	OBJEK	, A 1101	,								
										27	51	1	12	19	4	78		14											
Г		T	Π.			_	T		1		1			SPECIFIC N		5	Λο	1 501	UND		-1	PO 4-		TOTAL-	Ι.	102-N	NO3-N	SI O4Si	
	MESSENGA TIME		CAR		DEPTH	lm 1	T	*C		s *4.	510	MA-1	1	ANDMAL	Y-X107	DY	△ D N. M. 10 <sup>3</sup>		OCITY	0 2 1	ml/i	20 - 0		µg - al/		ig - et/l	yg - 01/1	PB - a1/	ph
1	HR 1/10	-	-						+-		-		-			+ ^	10	+			-		+		+-	$\rightarrow$			
			١ .	t p	000	0	١,	026	36	48	7 9	84	-	0021	712	100	000	15	246		-		1		1	3			
	118		OB:		000			026		477		84		0021	115	00	,00		246										
	110	0		TD.	001			021		48		85		0021	597	0.0	22		246										
				TD	002			016		49		87		0021			43		246										
	118	В	OB:		002			013		492		88							246										
				TD	003		1	990	36	51	2 5	96		0020	675	0.0	64	15.	241										
	118	8	OB.	S	004	9	1	916	36	526	26	516						15.	224										
			5	TD	005	0	1	913	36	52	26	517		0018	760	01	04	15	223										
	118	8	OB:	S	007	4		855	36	472		528							210										
			5	ΤD	007		1	854	3€	47	2 (	528		0017	760	01	49	15	210										
	111	8	08		009			824																					
				TD	010			823		47		536		0017			93		206										
				TO	012			807		47		540		0016	809	02	235		205										
	111	8	OB		014			794	_	472		543		0016		0.7			205										
				TD	015		_	793		47		543		0016	203	0 2	277		205 206										
	111	в	08		T019			770 769	_	6470 647		549 549		0016	192	0.2	359		206										
				TD TD	025		_	743		47		556		0015			439		207										
				TD	030			716	-	44		560		0015			17		207										
	111	А	OB		T039			667		288		660							206										
				TD	040			654		26		561		0015	699	06	573		202										
	114	8	OB		049			502		996	2	675						15	167										
			5	ΤD	050	0	1	488	35	98	2	5 <b>7</b> 7		0014	350	0.8	323	15	164										
	113	8	08	S	T 0 5 8	17		356		785		690							133										
				ΤD	060			329		74		692		0013			960		126										
				TD	070			128		45		709		0011	483	10	083		070										
	111	8	OB		078			976		303		725							028										
				TD	080			1939		29		730		0009			187		017										
		_		TD	090			769		23		752		0007	318	1 4	271		969										
	11	В	ов		T092			731		216		757		0006	6 2 2		341		958										
				TD TD	100			701 660		522		761 766		0006			941 904		959										
				TD	120			619		522		772		0005		_	462		960										
	11	я	08		124			601		215		774		2303	000	1			960										
	11	0		TD	130			579		520		776		0005	258	15	516		960										
				ΤD	140			539		517		778		0005			568		960										
				TD	150			499		513		780		0004			517		960										
	11	8	OB		T151	4	C	493	35	5125	2	780						14	960										

C€	SHIP	LATITE	IDE	ONGITUDE	MAR SOL	SDEN		ON TH	WE YE	A R	_	ORIGIN/			DEPIH	MAX DEPTH		WAVE SERVATIO	)NS	WEA-	CLOUD		F C 1	DODC
D.	COOE	*	1/10	1/10	10.	1,	MO O			~ ~ ~	CRUISE NO.		TATIO	ER .	BOTTOA	S'AMPL		HGT PER		CODE			N	UMBER
62	ME	3457	2N 0	47576W	113	47	04 3	0 1	33 19	68	E10	014	4		4664	15	31		2	X0			(	0014
						WA		- 7		RARO	)• <del> </del>	LIR TEA	MP T	VIS	NO.	5 9 6	CIAL							
						COLOR	TRANS.	DIR.	SPEED DA FORCE	METE: adm)		DRY ULB	BUL		OBS. OEPTHS	I marray	VATIONS							
								01		186	5 1	83	16	1 7	14									
	MESSENGI	R CAST	CARD				1		T		SPECIFIC	VOLU/		₹ ∆ D	1,0	UND		PO.4-		OTAL-P	NO2-N	NO3-N	SI C 4-51	
	TIME HR 1/10	of NO.	TYPE	DEPTH to	ni i	r *c	2	٠/	SIGMA-	-1		ALY-XIC		X 103	. VEL	OCITY	0 2 ml/	PQ - 0		ا/10 - ور	ug - at I	yg = ob l	vg = af T	pН
	HX 1710								-	-			-			-								
			STC	0000	1	857	364	.1	2622	- 1	001	8052	2	0000	1.5	198		1						
	133	3	085	0000		857	364		2622			000	_			198								
		-	STO			848	364	_	2624		001	7878	8	0018		197								
			STE			840	364	0	2626			7729		0036		196								
	133	3	OBS	0024	1	837	364	03	2627						15	196								
			STD		_	834	364	_	2628		001	7570	0	0053		197								
	13:	3	085	0048		826	364		2631							197								
		_	STD			826	364		2631		001	7384	4	0088	_	198								
	13	3	085	0072		819	364		2633		001	300	_			199								
	13:	2	STD OBS	0075 0096		815 790	364 364		2634 2640		001	7202	2	0132		199 1 <b>9</b> 5								
	13.	9	STE		_	787	364		2641		001	6596	_	0174		195								
			STE			772	364		2646			625		0215		194								
	133	3	085	0145		764	364		2648		001	02)	•	0217		195								
			STO			763	364	_	2648		001	607	3	0255		196								
	131	3	065	0193		756	364		2651							201								
			STO			753	364	4	2651		001	5990	0	0335		201								
			STC	0250	1	730	364	1	2654		001	5902	2	0415	15	202								
			STE	0300	1	707	363	7	2656		001	5809	9	0494	15	203								
	133	3	085	T0384	_	669	363	-	2661							205								
		_	STE			641	362		2663		001	5479	5	0651		198								
	13	3	085	0479		508	359		2674		00-		•			167								
	121	2	STO		_	477	359	-	2677		001	4330	U	0800		160								
	13:	5	08S ST[	T0579 0600		359 325	357 357		2691 2694		001	2890	0	0936		133 125								
			STE			167	355		2708			2690 1631		1059		085								
	13:	3	OBS	0769	_	059	354	_	2719		200	103	t	1039		057								
		_	STD			002	353		2726		000	9925	5	1166		041								
			STE			843	352		2746			8068	_	1256		998								
	133	3	OBS	T0968		754	352		2755							974								
			STD			726	352		2758		000	6887	7	1331		968								
			ST	1100	0	647	351	7	2765		000	6206	6	1397	14	953								
			STE			577	351		2771		000	561	1	1456		942								
	133	3	085	1218		566	351		2771						_	940								
			STC			519	350		2774			5276		1510		934								
	12	2	STE			471	350		2775		000	508	1	1562		931								
	133	2	085	T1476		441	349	9 (	2775						14	930								

REFERENCE						- =	MAR	DEN	STATI	IT NO				ORIGIN	ATOR'S		DEPT		AAX. EPTH		WAV	′£	WEA		CLOUD			NOOC
CT#Y ID.	CODE	LATITU		LON		NDC	squ			S M TI		EAR	CRUIS		STATION		10 80110		OF			TIONS	THE	r .	CODES		S	TATION
DE NO.	1		1/10		1710	=	10°	1.	MO D	AY H	R.1/10		NO.	<u> </u>	NUMBER		*0110	/m 5'/	MPL'S	DIR.	HGT	PER SEA	COD	11	FMA 59Y			UMBER
311262	2 ME	3508	3N	047	7589W		113	57	05 0	1 1	81 1	968	E10	01	5		370	4	14	20		1	X 1		4 6		ļ	001
								WA	831	٧	/IND	BARC	)- L	AIR TE	MP. ℃	VIS.	NO.		SPEC	18.1								
								COLOR	TRANS	D1R.	SPEED	METE		ORY BULB	WET	COD	DEPTI		SERVA	TIONS								
								CODE	lm i		FORCE	(mbs	-		BULB	-	-	-										
										20	518	18:	3 1	94	183	7	14											
	MESSENGE	CAST	CAR	D	DEPTH	(_ \		"C	1.	٠/	SIGMA		SPECIF	IC VOLU	IME 3	E A O	. 5	OUNC	) .	0 1/1	PC	04-P	TOTAL-	P N	102-N	NO3-N	SIO4-SI	
	HR 1/10	NO.	TYP		DEFIN	(m)		C.	,	/· ·	SIGMA	N 1	ANO	MALT-X	107	x 10 <sup>3</sup>	1. V	ELO C I1		02 ml/l		· at/1	ug - a1/		g - a1/1	μg - α1/l	μg - ot/l	рН
		1							_								+		-+-		<del> </del>			+-				_
	1	1	51	in I	000	Ď	1.	843	364	3	262	A j	001	751	3 0	000	1	519	4		1	ţ		1	1		I	1
	181		083		000		_	843	364		262		00,	. , , , ,	, ,	000	_	519										
	101		51		001			841	364		262		001	748	5 0	017		519										
			51		002			836	364		263			738		035		519										
	181	1	083		002		_	834	364		263					0 3 3	_	519										
			51		003			823	364		263		001	711	2 0	052		519										
	181	1	OBS	5	004	6	1	802	364	37	263	8						519										
			51	D	005	0		796	364	4	264		001	651	9 0	086		518										
	181	t	083	5	006	9	1	773	364	45	264	6					1	518	6									
			51	g	007	5	1	770	364	5	264	7	001	595	8 0	126	1	518	6									
	181	Į.	OB 5	5	009	2	1	764	364	46	264	9					1	518	7									
			51	O	010	0	1	763	364	5	264	9	001	584	4 0	166	1	518	8									
			S 1	D	012	5	1	760	364	5	265	0	001	585	9 0	206	1	519	1									
	181	l	083		013			759	364	54	265	0					1	519	3									
			51		015		1	759	364		265		001	589	2 0	245		519										
	181	ļ.	OBS		1018			758	364		265							520										
			51		020			751	364		265			598		325		520										
			51		025		_	731	364		265			598		405	_	520										
			S		030			711	363		265		001	598	7 0	485		520										
	181	l	083		T036			686	363		265							520										
			51		040			630	362		266		00.	558	/ 0	643		519										
	181	L	083		045			556	360		266		003			70.		517										
	101		51		050			500	359 358		267		UU.	468	2 0	794		516										
	181	ı	0B3		T054			441 342	357	_	268		00.	330		934		515 513										
			51	_	070			179	355		269			179		060		508										
	181	,	083	_	072			143	355		271		00.	1117	9 1	080		508										
	101		51		080		_	044	354	_	272		oo:	024	0 1	170		505										
				ΤD	090		_	918	353		273			881	_	265		502										
	181	ı	083		092			886	353		274		000	. 501				501										
	101	•		TD	100			782	352		275		000	747	6 1	347		499										
			51		110			667	351		276			650		416		496										
	181	ı	OB S		116			608	351		276				- 1		_	494	-									
		-	51		120			581	351		276		000	588	8 1	478		494										
			S		130			525	350		277			)558		536		493										
			51	T D	140	0	0	498	350	2	277	1	000	553	5 1	591	1	494	2									
	181	l	083	ŝ	T140	5	0	497	350	20	277	2					1	494	2									

CTAY	10	SHIP	LATITU	JDE	LONGITUDE		U A RE	STATION T		YEAR	CRUISE	STAT	ON	DEPTH	DEFIN	08:	WAV SERVAT		THE	R CC	OUD			NODC	
CODE	١٥.	CODE	•	1/10	1/10	¥ 10*	1*	MO DAY	HR,1/10		NO.	NUM	BER	BOTTON	S'MPL'S	DIR	HGT	ER SE	_ COE	TYPE	AM1			NUMBER	
3112	262	ME	3509	N	04801 W	11	3 58	05 02	148 1	968	E10 0	16		2423	05	21		3	3   X3	:   3	2			0016	
							WA	TER	WIND	BARC	A IR T	E AA P.	*C VIS	NO.	Ser	CIAL									
							COLOR	TRANS. DIR.	SPEED OR FOPCE	METE			FT CODE	OBS. DEPTHS	DOCCOM										
								25	508	19	3 206	1	94 8	0.8											
		MESSENG TIME HR 1/10	NO.	CAI		m)	1 °C	5 **	SIGM	A =1	SPECIFIC VOI		₹ △ 0 DYN. M x 10 <sup>3</sup>		OCITY	0 2 ml/l		4-P • at/l	TOTAL-			NO3-N yg - al/l	\$1 Oa=\$		s c c
																	}							1	
			_	_	TD 000		1871	3638	261		001854	+9	0000		202										
		14	8	08:			1871	36383	261			_			202										
					TD 001		1861	3641	262		001814		0018		201										
				_	TD 002		1849	3643	262		001774	+ 9	0036		199										
		14	В	OB:			1842	36432	262		00173		0051		198										
				_	TO 003		1831	3643	263			-	0054	_	196										
			0		TD 005		1798	3641	263		00167	54	0088		189										
		14	0	08.	S 005 TD 007		1798 1782	36410 3640	263 264		00165		0130		189 189										
		14	۵	0B.	_		1781	36396			00165	00	0130		189										
		14	0		TD 010		1750	3640	264		00158	0.0	0170		184										
		14	А	OB	-		1748	3040	2.04	7	00170	50	0170	1 )	104										
		1-4			TD 012		1749	3641	264	0	00158	27	0210	16	187										
					TD 015		1749	3642	265		00159		0250		192										
					TD 020		1751	3643	265		00160		0330		200										
		14	8	OB	_		1751	36430							202										
		-			TD 025		1740	3641	265		00161	06	0410		205										
					TD 030		1716	3636	265		00160		0491		206										
				S	TD 040	0	1636	3621	266	1	00156	51	0649	15	196										
		14	8	OB		1	1614	36165						15	193										
		1.6	А	# C	Th 062	7	1/.20	35841	247	7	00143	0 0	0840	1.5	151										

																		_											
REFE	RENCE	Ι,	HIP		[			L 5	MAR	SDEN	STATIC				0	rigin	A TOR'S		DEPTH	M.A DEP			WAVE	WEA	- Crons	)		NODE	
CTRY	IO.		OE	LATITU		LONG	GITU DE * 1/10	DRIFT	SQL	ARE		MTI		YEAR.	CRUISE NO.		TATION		TO BOTTON	. 0	F		ERVATIONS	THER				TATION	
- +		+-			1/10			+		1*		Y HR	-					-		3 001			HGT FER SE	-	TYPE AN				4
31	1262	2  M	E [	3502	3N	047	561W	i	1113			_		968	E10				4115	1	5	12	2 2	X1	3 6			0017	7
										WA	+	WI	SPEED	BARO		_	M.P. °C	VIS	NO. OBS.		PECIAI								
										COLOR	TRANS.	DIR.	OR	METE!		RY LB	BULB	CODI	OEPTHS	OBSE	RVA TI	ONS							
											+ +	19	510	207	-	7	201	8	14	+		_							
		_							_	_	1	19	510	201	7 21		206		14	L	-					1		-	_
			SENGE		CAR TYP		OEPTH	(m)	1	70	5 -	٠.	SIGM	A = T	SPECIFIC			A D		UND	02	min	PO4-P	TOTALER		NO3-N		0 ↔	
		HR	1/10	. 140.	111	•									40000		_	x 10 <sup>3</sup>	VEL	OCITY			µg + 01/1	µg - 01/1	ug - of-l	yg = 01/1	10 - gu		
														ĺ												Ì			
					51	D	000	0	1	901	364	2	261	2	0018	98	8 0	000	15	211									
			181		083		000		-	901	364		261							211									
					ST		001			867	364		262		0018			019		203									
					ST		002			842	364		262		0017	779	9 0	037		197									
			181		085		002			834	3639		262		001-			06.		195									
					\$1		003			831	3641		262		0017			054		195									
			181		51 085	_	005			815	3639		263 263		0017	30.	9 (1	089		194									
			101		\$1		007			815 786	3639 3643		264		0016			132		194 190									
			181		085		007			786	364		264		0016	9400	0 0	152		190									
			101		ST		010		_	766	364		264		0015	94	3 0	172		189									
			181		085	_	010		_	766	364		264		0013	, , 4 .	, ,	112		189									
					ST		012		_	762	364		264		0015	90	6 0	212		192									
					ST		015			759	364		265		0015			252		195									
			181		085		015		1	759	3645	53	265							195									
					S T	0	020	0	1	756	364	5	265	1	0016	01	9 0	331	15	202									
			181		085		T020			756	364		265							203									
					ST		025			755	364		265		0016			412		210									
					ST	_	030			736	364		265		0016	18	1 0	493		212									
			181		085		T039			642	3621		266		0016					198									
					5 T 5 T		040			640 467	3621 3591		266		0015			652 802		198									
			181		085	-	050		_	462	3589		267		0014	400	5 0	002		157 155									
			101		ST		060			296	3564		269		0013	10	, o	939		114									
			181		085		T060			293	356		269		0013	10.	4 0	737		113									
					ST		070			169	355		270		0011	8 2	0 1	064		085									
					S T		080		_	045	354		272		0010			175		057									
			181		085		080		_	038	3540		272							055									
					5 T		090			921	3536		273		0008	86	5 1	272		028									
					5 T		100			803	3530		275		0007			354		999									
			181		085	;	T100	3	0	800	3529	96	275	3					14	998									
					Ş T		110			674	3519		276		0006			424	14	964									
					\$ T		120			573	351		276		0005	77	3 1	485	14	940									
			181		OBS		126			526	3506		277							930									
					S T		130			515	350		277		0005		_	541		932									
					ST		140			487	350		277		0005	-	-	594		937									
			181		ST		150			459	3501		277		0005	029	9 1	645		942									
					OBS		T152	U	0	453	3502	26	277	1					14	943									

TRY IO,	SHIP	LATITU		LONGITUOE	DRUFT	MARS SQU	ARE		MT)	'	re ar	ORI CRUISE NO.	GINATO STAT NUN	Юн	$\dashv$	DEPTH TO BOTTOM	MAY, DEPTH OF		SER	A VE VATIONS	WEA- THER COOE	CLOUI	5	5	NODC TATION UMBER
+	1	-	1/10	1/1	,	10*	1.	MO DA	-			<del>- i</del> -		BEK	$\rightarrow$		S'MPL'S	1	1-	GT PEP SE	A   0001	ITPE A			CIVIDER
311262	Z ME	3457	4N	047589W		113			4 13		968	E10 (				4298	16	24	0	3	×1	8 3		1	0018
							WA	TER	WIN		BARO	-	TEMP.	°C .	VIS	NO.	SPE	CIAL							
							COLOR	TRANS.	OIR.	SPEED OR	M ETER		W	ET C	000	OBS. DEPTHS	OBSERV	ATIONS							
							COOL	-	-	ORCE	-			-	_	-			1						
						,			95 S	10	234	194	1	83 8	8	14			L,						
	MESSENG	CAST	CAR		(m.)	1 ,	*c	s •.	,	SIGM	T - 4	SPECIFIC V		₹ ∆ DYN	2 0	sou		O2 m1/	.	PO4-P	TOTAL-P	NO2-N	NO3-N	SI 04-SI	١.
	HR 1/1		TYPE		<b>U</b> 111	`		1		31011	,	ANOMAL	-x107	x 1	103	AFFC	CHTY	0 2		pg - 01/1	¥9 - 01/1	νg • σ1/		yg - a1/l	p+
													-						_						
	i		ST	000 a	0	1	995	3648	3 '	259	2 1	00209	21	000	0.0	152	237		-	,		1	l	1	1
	13	0	085			_	995	364		259						152									
			ST				989	3647		259		00 208	365	002	21	152									
			S.T				969	364		259		00204		004		152									
	13	0	085				954	3646		260			-	- /	_	152									
			ST			19	922	3646		261		00193	343	000	61	152									
	13	U	OBS	004	9	18	830	3643	31	263	1					151	199								
			5 T	D 005	0	13	827	3643	3	263	2	00173	328	009	98	151	198								
	13	0	085	007	4	1	786	3640	02	264	0					151	90								
			s T	D 007	5	1	786	3640	)	264	0	00166	646	014	41	151	190								
	13	U	OBS	009	7	1	780	3640	1	264	1					151	192								
			SΤ	D 010	0	1	779	3641	l	264	2	00169		018	82	151	192								
			ST	D 012	5	1	771	3643	3	264	6	00162	262	022	23	151	194								
	1 7	U	OBS		6	1	765	3644	+8	264	8					151	196								
			ST			_	764	3645		264		00160	060	026	63	151	196								
	13	0	0 <del>8</del> S				752	3643		265						152									
			ST			_	750	3643		265		00159		034	-	152									
			ST				725	3639		265		00159		042	_	152	_								
			ST				701	3635		265		00158	303	050	03	152									
	13	0	08 c				556	362		266						152									
		0	51				536	3623		266		0015	06	06	59	151									
	13	U	085				464	3589	-	267	-	0034				151									
	12	0	ST OBS				455	3589 3576		267		00142	95	080	บช	151									
	13	U	51				343 333	3575		269 269		00130	\E 3	094	, c	151									
			5 T				167	3554		270		00119		100		151 150									
			ST				017	3539		272		0010		11		150									
	13	Λ	OBS	_		_	014	3538		272		0010.	117	1 1	10	150									
	13	•	SI				880	3531		274		0008	35	12	<b>7</b> ^	150									
			ST				763	3525		275		0007		134		149									
	13	0	OBS				750	3524		275		0001		1,	• 0	149									
			5.T				565	3519		276		00063	129	14	16	149	_								
			ST				585	3514		277		0005		14	_	149									
	13	0	OBS				530	3510		277			_	•	-	149									
			ST				522	3510		277		0005	72	153	30	149									
			51				477	3506		277		00049		158		149									
			51	D 150	0	04	448	3502	2	277	7	00049	48	16:	30	149	938								
	13	0	085	T155	8	0.	440	3500		277	7					149									

Table V.—Observed and interpolated oceanographic data for stations taken by USCGC CASCO at Ocean Station ECHO, 5-27 May 1968, prepared from NODC listing No. 31-1248

REFERE	NCE	SHIP							RSDEN		TATION	TIM	E			ORIGI	ATOR"		T	DEPTH	DEPTH		W	AVE		w		CLOUD			NODC
	10.	CODE	LATITU		LONG	HUD	ia:	7	UARE		1G M			YEAR	CPUI		STATIO		_	TO MOTTO	OF	L '	\$328C			TH	ER	CODES		2.	TATION
ODE	NO.			1/16			.10	10*	1	-	DAY	HR.	1/30		NO		NUMBE	R	10	DIIOM	2,W br.	\$ 010	Н	GT PE	8 2E1		,06	TYPE A MT		N	UMBER
311	248	CS	3500	N	048	00	W	111	_		05	12	28   1	1968	E 1		_		4	572	14	02	2 2	4		X	1	8 3		(	1 000
									1	A TER		WI		BAR	0-	AIR TE	MP. ℃		15	NO,	SPS	CIAL									
									COL		ANS D		SPEED	MET		ORY BULB	WE1	CC	nne.	OBS. DEPTHS	OBSERV		15								
									-	-	-	-	FOFCE	+	-		+	$\rightarrow$	+	• .	-		-								
											3	2 3	808	28	В	189	16	_		14	L		Д,				_				
	- 1	MESSENGR TIME		CAI		D£P1	[H (m)		r *c		5 %	.	SIGA	1 A A		FIC VOL	JALE	Σ Δ DYN,	D		JND	O <sub>2</sub> m	IZI I	PO.		TOTAL		NO2-N	NO3-N		p H
	l	HR 1:10	4 110.	TYI	PE										ANG	M ALY-1	107	X 10	3	VELC	CITY			νQ *	01/1	₽8 . D	EZT.	µg - at/l	μg - 01/	µg − 01 'I	pit
				S	TD	0.0	00		197	1	3649		259	99	00	2024	7 (	00	0	152	231										
		128	3	08			00		1971		648	8	259							152											
					T D		10		193		3647		260			1956		002	-	152											
			_		TD		20		1904		1645		261		00	1893	8 (	03	9	152											
		128	3	08	-		23		1894		1644	9	261		•		_		_	152											
		128		08:	TD -		130		L870 L824	-	644 641	7	262		00	1821	9 (	05	8	152 151											
		120	,		J TD		50		1816		642		263		00	1716	0 (	009	2	151											
		128	2	08			69		1781		641		264		00	1110	0 (	, 0 7	,	151											
		120	,		TD		75		1771		642	,	264	_	00	1616	3 (	13	5	151											
		128	3	08			92		75		642	4	265					•		151											
				S.	TD	01	00		175	1 3	643		265	0	00	1570	8 (	17	5	151	184										
				S.	TD	01	25		1751	1 3	644		265	51	00	1572	1 0	21	4	151	188										
		128	3	08			36		1751	1 3	644	3	265	1						151	90										
					TD	_	50		175	_	645		265		00	1577	0 (	25	3	151											
		128	3	08	-	101			1750		1645	0	265							151											
					TD		00		1747		3645		265			1583		33	_	152											
					TO		50		1738		643		265			1588	-	41	_	152											
		128		085	_	†03	00		1729 1720		3642 3641	^	265		00	1593	2 (	)49	1	152											
		120	,		o TD		.00		69		636	U	265		00	1591	0 (	65	^	152 152											
		126	3	08	-		40		1652		628	Ω	266		00	1 7 7 1	,	, 0 ,	0	152											
			-		TD		00		1535		606	_	267		00	1479	3 (	80	4	151											
		128	3	08	-	T 0 5			478		596	4	267				- '			151											
					TD		00		374		581		268		00	1345	9 (	94	5	151											
					TD	07	0.0		1216	5 3	561		270		00	1199	9	07	2	151											
		128	3	083			13		1199		1559	0	270							150											
					TD		00		1036		1545		272		00	1002	2	18	3	150											
		128	3	083		T 08			890		5331	0	274						_	150											
					TD		00		876		532		274			839		27		150											
				S 1			00		740		523		275			703		35		149											
		128		S1 08:			00 35		631 600		516 513	٥	276		001	0604	۷ .	41	,	149											
		120	,		s TD		00		1551		510	o	277		001	)545		47		149											
				5			00		498		506		277			)513		52		149											
		126	,	08	-	T 13			475	-	503	7	277		001	,,13	٠.	. 12	O	149											

NOC STATI NUM		CLOUD CDDES	WEA- THER CODE	WAVE RVATIONS HGT FER SE	OBSI	MAX. DEPTH OF S'MPL'S	DEPTH TO IDTTOM	$\dashv$	TATION UMBER	ORIGIN	CPUIS NO	YEAP		TION THE		MARSDEN SQUARE	GITUDE HE SOU	DE LOF	LATITUI	SHIP
000		8 2	×1	1 3		39	429	-		+		968							2501	
1 001		0 12	1 ^ 1	1 12 1	·		NO.			A IR TE	-	BARD	IND	06 1		113 58 WAI	800 W	N   04	3501	CS
					ATIONS	SPEC OBSERVA	OBS. DEPTHS	CODE	W E1 BULB	DRY BULB	R	METER (mbs)	SPEED OR FORCE	S DIR.	TRAN	COLOR				
							19	7	161	194	2	312	512	07						
10 4-2)	NO3-N NO - 01/I	ND2-N 49 - 01/1		PO4-P 90 + 01/1	0 2 ml/l	DCITY		△ 0 rN. M. x 10 <sup>3</sup>	M € 0?	HC VOLU	SPECII	A-1	SIGM	5 *4.		r °c	DEPTH (m)	C A R D T Y P E	CAST NO.	MESSENGR TIME O
						212		000	0 0	1920	00		261	41		1907	0000	STD		
							15						261	414		1907	0000	085	1	117
							15	019		1846			261	43		1880	0010	SID		
							15.	037	0 0	1784	00		262	44		1857	0020	STD		
						201							262	446		1855	0021	085	7	117
							15	055	9 0	1756	0.0		262	43		1840	0030	STD		
						195							263	422		1820	0043	085	7	117
						193		089	7 0	1694	0.0		263	43		1811	0050	STD		
						191							264	441		1793	0065	085	7	117
						189		131	3 0	1622	0.0		264	44		1781	0075	STD	_	
						188							264	446		1772	0085	085	7	117
						190		171		1596			264	45	-	1768	0100	STD		
						192		211	0 1)	1586	00		265	46		1763	0125	STD		
						192 195		350	• •		00		265	459		1762	0127	085	′	117
								250	2 0	1587	00		265	46		1760	0150	STD	•	
						198	15	330		1600	00		265	464		1758	T0170	085	,	117
								409		1589			265	45		1751	0200	STD		
						205 209		489		1594 1599			265 265	43		1738	0250	STD		
						212	_	407	9 0	1277	00		265	40 388		1726 1718	0300 10332	STD	,	
						203		647	٠ ،	1562	00		266	27		1654	0400	085	•	117
						200		041	0	1 702	00		266	239				STD	,	
						176							267	029		1639 1526	0413 T0493	085 085		117
						174		799	1 0	1476	00	_	267	01		1517	0500	STD	'	117
						141		940		1341			268	81		1372	0600	570		
						119		/40	0 0	1,741	00		269	696		1282	0657	085	7	117
						098		067	3 1	1167	0.0		270	559		1202	0700	SID	'	11.
						050		178		1031			272	39		1028	0800	STD		
						041		1.0	_ 1	1051			272	358		0995	10820	085	7	117
						005		272	7 1	0848	0.0		274	28		0864	0900	STD	•	11
						969		349		0700			275	21		0729	1000	STD		
						959			• •				276	185		0687	1037	085	7	117
						950		415	5 1	0614	0.0		276	16		0638	1100	STD		
						938		473		0556			277	12		0569	1200	STD		
						932			_				277	5088		0523	11274	085	7	117
						934	14	528	2 1	0526	00		277	808	3 9	0518	1300	STD		
						942	14	580		0515		76	277	507		0497	1400	STD		
						951	14	631	2 1	0507	00	77	277	06	35	0478	1500	STD		
						974	14	756	6 1	û492	00	30	278	503	3 !	0434	1750	STD		
						001	15	877	7 1	0477	00	32	278	501	3	0397	2000	STD		
						022	15		_				278	997	34	0375	72178	085	5	135
						066	15	112	9 2	0462	00	35	278	199	34	0349	2500	STD		
						104	15						278	4972		0325	2783	085	5	135
						132	15	342	6 2	0456	00		278	95		0303	3000	STD		
						186	15						278	4930		0267	T3398	085	5	139
						237							279	4930		0240	T3759	085		13

REFERENCE	SHIP				£ 1.	MARS	DEN	STAT	STATION TIME		YEAR		RIGINA	A TION		DEPTH	DEFTI		OBSERV	LVE A TIONS	WEA	R C	ODES		S	NODC	
ID. E NO.	COOF	LATITUE	DE 1/10	LONG	TUDE SOUT	10"			AY H		, can	CRUISE NO.		JMBER	8	0110	M S'MPL	·S DI	R. HG	T PER SE	COD	111	E AMT			NUMBER	-
11248	cs	3500		048	00 W	113	58	05 1	3 1	21 1	968		003		4	599	43	2	6 1	3	ΧI	8	3			0003	i
цигчо		,,,,,,					WA	-	-	SPEED	BARC	)·	AIR TEM	P. °C WET	VIS.	NO. 085.	SP	ECIAL VATION									
							COLOR	TRANS.	DIR.	OR	M ETE		ULB	BULB	CODE	DEPTH	2 OBZEK	V A IIO	* 3								
									30	505	22	7 2	11	161	7	21											
						1		1				SPECIFIC	VOLUM	. E	∆ D YN, M.	SI	DUND	02 1		PO 4 - P	FOTAL-		02-N	NO3-N	5104-5		4
	MESSENG TIME	T CAST	CAR	E	DEPTH Imi	1	*C	2	٠/٠٠	SIGA	1 A A	MOMA	ALY-X10	,	YN, М. x 10 <sup>3</sup>	VE	LOCITY	02	""	µg + a1/(	ug + at/	No.	- at/1	yg - a+/1	µg = at/	1	
	HR 1/10	-		-		+																					
			   51	ם <sup>ו</sup>	0000	1	904	364	47	26		001	8706	ંગ	000		212										
	12	1	OBS		0000		904	-	472	26		001	0750		010		5212 5214										
			51		0010	_	904	36		261 261			8759 8812		019 038		5216										
			51		0020 0024		905	36	4 / 469	26		00.1	6012	,	0 ) 0		5216										
	12	1	085 51		0030		883	36		26		001	8462	2 0	056		5211										
	12	1	089		0049	1	827	36	428	26							5198										
		-	S1	D	0050	_	825	36		26		001	7280	0	092		5197 5191										
	12	1	083		0073		790	36 36	452	26 26		001	6347	<b>7</b> ∩	134		5191										
				TD	0075 0097		789 778		45 460	26		001	0 5 4 .		• .		5192										
	12	1	08	TD	0100		778	36		26		001	6123		175		5192										
				TD	0125	1	773	36	45	26		001	6164	4 0	215	_	5195										
	12	21	08		0145		1768		443	26					255		5197 5197										
				TD	0150		1766	36		26		001	6158	• 0	1299		5199										
	12	1	08		T0194 0200		1750 1747		428 42	26 26		001	600	9 0	336		5199										
				TD TD	0250		1723		38	26			591	0 0	415		5200										
				TD	0300		1699	36	34	26	56	001	582	0 0	495		5200										
	12	21	08		T0382		1659	_	272		60						5201 5192										
				TD	0400		1623		20		63	00	1542	9 (	1651		5160										
	12	21	08		0480 0500		1486 1464		942 92		78	00	1427	0 (	800		5156										
	12	21	OB	TD S	10577		1365		793		89						5135										
	14	2 1		TD	0600		1319		72		93	00	1298	-	936	_	5122										
				TD	0700		1134		48		10	00	1137	7	1058		5073										
	12	21	08		0763		1031		376		21	20.	2041		1142		.5045 .5031										
				TD	0800		0976 0842		36		29 47		0961 0790		1163 1250		4997										
		2.1	08	TD	0900 T0950		0 <b>783</b>		281		54	00	0170				4983										
	1.	21		TD	1000		0733		25		159	00	0677	6	1324		4972										
				TD	1100		0645	35	18		66	00	0610	3	1388		14953										
	1	21	08		1191		0580		135		771		^ <b>^</b>	-			[494] [494]										
				TD	1200		0575		13		771 774		055 <b>8</b> 0530		1446 1501		14941 14937										
			_	TD	1300		0526 0485	-	509 506		776		0506		1553		4937										
		21	08	TD	1400 T1437		0471		5052		777	•••	.,,,,	•			14937										
		21		TD.	1500		0456		504		778	00	0491	2	1603		14941										
				TD	1750		0406		499		779	00	0482	7	1724		14962										
	1	40	08		T1886		0386		4979		781	0.0	0				14977										
				STD	2000		0378		499		782	00	0465	4	1841		14993 15050										
	1	40	08		2392		0354		4998 499		785 785	00	0467	74	2076		15067										
	,	4.0	08	STD	2500 12885		0330		497 497	_	786		2401	. •			15124										
	1	40		STD	3000		0312		496		786	00	0463	33	230	9	15136	5									
	1	40		35	T3439		0259	9 3	492		789						15189										
		40		35	3914		0231	-	489	_	789		0		. 7.		15260										
				STD	4000		0230	-	490		788	00	0432	2.2	275		15275 15304										
		40		35	T4168		0228		489		788 788						15322										
	1	40	06	BS	T4273		0228	3	488	1 2	788																

FERENCE y ID.	SHIP	LATITUDE		LONGITUDE		APSDEN QUARE	STATION	TIME	YEAR	CRUISE	RIGINA	TOR'S A TION	4	DEPTH	MAX. DEPTH	01	WA BSERV	VE A TIONS	W		CLOUD			NODC
ND.		1/2	10	1710	10	. 1.	MD DAY	HR,1/10		NO.		JANBER		BOTTOM	OF S'MPL*	DIR		PER 5	_1 60		TYPE AMI			STATION NUMBER
11248	CS	3500 N	C	04800 W	11		05 14		1968	<del></del>	004			4554	16	21				(6	4 9			0004
						_	R TRANS. DIE	SPEED	241 641	ER D	RY LB	WET BULB	VIS CODE	NO, OBS, DEPTHS	SPEC OBSERV		1							
		,					23	531	12	5 19	4	178	7	14		_	1							
	MESSENGR TIME ( HR 1/10		ARD	DEPTH (m	1	1 °C	s •4.	SIGA	MA=T	SFECIFIC ANOMA	VOLUM LY~X10 <sup>7</sup>	E \$ /	) D I. M. 10 <sup>3</sup>	. SOU VELO		02 ml/		O4=P	TOTAL.		NO <sub>2</sub> -N	NO3-N µg - 01/1	\$1 O4~\$	
			STD	0000		1867	3645	262	23	0018	003	000	20	162	0.1									<del> </del>
	130	01	3.5	0000		1867	36445	262		0010	003	000	00	152										
		:	STO	0010		1869	3645	262		0018	072	00	1 0	152 152										
			510	0020		871	3645	262		0018		003		152										
	130		35	0023		871	36448	262			'	00.	- 0	152										
			5 T D	0030	1	870	3644	262		0018	185	005	54	152										
	130	08		0047		867	36434	262	2.2					152										
	120		TD	0050		850	3641	262		0018	025	009	91	152										
	130	OE		0070		.767	36342	264						151										
	130		TO	0075		759	3635	264		0016	390	013	34	1518										
	130	08	TD.	0093		737	36378	265						151	78									
			TO	0100		733	3638	265		0015		017		151	78									
	130	08		0125 01 <b>38</b>		723	3638	265		0015	514	021	3	1517	79									
	1,00		TD	0150		719 718	36379	265						1518	30									
	130	08		T0182		714	3638	265		00154	490	025	1	1518	32									
			Tρ	0200		708	36376 3636	265		^^				1518										
			TD	0250		690	3633	265		00159		032		1518										
			TD	0300		673	3629	265 265		0015		040		1519										
	130	ОВ	S	T0361		651	36248	266		00155	000	048	4	1519										
		S	TΟ	0400		587	3613	266		00161	20	0.0		1519										
	130	ов	S	0461		498	35986	267		00151	128	063	В	1518										
		S	TO	0500		459	3593	268		00140	100	078	,	1516										
	130	OB		T0566		375	35821	268		00140	770	078	4	1515										
			ΤD	0600	1	291	3570	269	-	00125	6.68	091	7	1513 1511										
		_	ΤD	0700	1	072	3541	271		00107		103		1505										
	130	OB.		0790	0	910	35231	2730		10.	7.2	103	-	1500										
			Tρ	0800	0	896	3523	273		00091	94	113	4	1500										
			10	0900	0	769	3519	274		00076		121		1496	-									
			TD	1000	0	564	3516	2761		00063		128		1494	_									
	130	08:		T1015		550	35154	2763	3					1494										
			TD.	1100		89	3512	2768	8 (	00057	25	1348	В	1493										
			0	1200		530	3509	2773	3 (	00052		140		1492	-									
	130	S OBS		1300		+85	3506	2 <b>77</b> 6		00049	51	1454		1492										
	130	VB3		1312		80	35058	2777						1492										
		S1		1400		52	3504	2778		00047		1502	2	1492										
	130	0B3		1500		33	3502	2779		00047	43	1550	)	1493										
		OBS	,	T1618	04	27	35007	2778	)					1494										

																					1.				
	REFERENCE				- =	MARSDEN	STAT	ION TIA			-		_			DEPTI	н с						5	TATION	
	CTRY ID.	COOF	LATITUI	1	NGITUOE					TEAR				- 1						- 0001	. 1	1	l N	UMBER	
	CODE NO.		<u> </u>	1/10	1/10						1		14.00	-		_		_	-					0005	
WATER   WATE	31124	8 CS	3500	N 04	800 W					968			- 1		4554	14	3.	7	2 (5 )	1 1	10.3		1	0000	
STD   ORD   1852   3645   2627   ORD   1852   3645   2627   ORD   1852   3645   2627   ORD   1853   3645   2628   ORD   1853   3645   2628   ORD   1853   3645   2628   ORD   1853   3645   2628   ORD   1853   3645   2628   ORD   1853   3645   2628   ORD   1853   ORD   1853   ORD   1853   ORD   1853   ORD   1853   ORD   1853   ORD   1853   ORD   1853   ORD   1853   ORD   1853   ORD   1853   ORD   1853   ORD   ORD   1853   OR						w	ATER	w			)- <del> </del>		_	VIS.											
								DIR.	OR					CODE		OBSER	VATION	12							
Mississed   Cast   Ca						000	-	20		+	-	_	122	7	14			_							
STD   OOO								29	312	13	119	3	-		4-7			_		_		_			
STD   OBS		MESSENG	R CAST	CARD				•/	110.14	A = T	SPECIFIC	VOLUM		A D			02 "	1/1							le.
STD   0000   1852   3645   2627   0017591   0000   15197   15201   1			♀ NO.		DEFIN ON	, ,	1		3,0.0		ANOM	ALT-\$10'	¥	103	VEL	OCITY			уg - 01/1	ng . ei/i	10 - 01/1	pg = 01/1	74	1	-
129		HX 1/1	1			1													İ		1				
129			1 1	s T D	0000	1852	364	45	262	7	001	7591	00	00	15	197	1		1						
STD   OOI   1853   3645   2627   OO17638   OOI   15199		12	٥												15	197									
129		12	,				364	45	262	7	001	7638	00	18	15	199									
129							36	45	262	7	001	7676	0.0	35	15.	201									
129 085 0043 1849 3645 2627 0017685 0053 15202 15203 15202 15203 1640 2633 0017208 0088 15198 15189 15199 15191 15		12	9				36	453	262	7															
129		12	•			1852	36	45	262	7	001	7685	0.0	953											
STD   ODS   1825   3644   2633   ODT   208   15189		12	9		0043	1849	36	451	262	8															
129				STD	0050	1825	36	44	263	3	001	7208	0.0	88											
129		12	9	085	0064	1789	36	438																	
STD   0100   1763   3646   2650   0015790   0169   15188     STD   0125   1759   3646   2650   0015790   0209   15191     129   085   0127   1759   3646   2651   0015863   0248   15195     129   085   70170   1757   36459   2651   15198     STD   0200   1744   3643   2652   0015864   0328   15198     STD   0250   1722   3639   2654   0015851   0407   15200     STD   0300   1700   3634   2656   0015838   0486   15201     129   085   7034   1680   36300   2658   15202     STD   0400   1603   3617   2666   0015196   0641   15186     129   085   0431   1558   36091   2670   15176     STD   0500   1450   3588   2678   0014261   0789   15151     129   085   70521   1416   35822   2681   15143     STD   0600   1270   3564   2697   0012586   0923   15105     STD   0700   1100   3544   2714   0011036   1041   15060     129   085   7073   1095   35434   2714   15007     STD   0800   0943   3527   2728   0009698   145   15018     129   085   7088   0824   35169   2739   14987     STD   0800   0698   3514   2755   0007021   1312   14956     STD   1100   0609   3512   2766   0006020   1378   14934     STD   1100   0609   35113   2768   14981     STD   1200   0543   3509   2772   0005420   1435   14981     STD   1300   0500   3506   2774   0005158   1488   14926     STD   1300   0500   3506   2774   0005158   1488   14926     129   085   1127   0589   35113   2768   14981   14927     STD   1300   0500   3506   2774   0005158   1488   14926     STD   1300   0500   3506   2774   0005158   1488   14926     STD   1300   0500   3506   2777   0005158   1488   14926     STD   1300   0500   3506   2777   0005158   1488   14926     STD   1300   0500   3506   2777   0005158   1488   14926     STD   1300   0500   3506   2777   0005158   1488   14926     STD   1300   0500   3506   2777   0005158   1488   14926     STD   1300   0500   3506   2777   0005158   1488   14926     STD   1300   0500   3506   2777   0005158   1488   14926     STD   1300   0500   3506   2777   0005158   1488   14926     STD   1300   0500   3506   2777   0005158				STO	0075	1775	36	45			001	6039	03	129											
STD   0125   1759   3646   2650   0015799   0209   15191   1		12	9	OBS	0085		_																		
129				STD	0100		_																		
129				STD		-					001	5799	02	209											
129		12	29								001		٠.	3 /. a											
STO   O200   1744   3643   2652   O015864   O328   15198					_						001	2002	0.4	c = 0											
STD 0250 1722 3639 2654 0015851 0407 15200  STD 0300 1700 3634 2656 0015838 0486 15201  129 085 70344 1680 36300 2658  STD 0400 1603 3617 2666 0015196 0641 15186  129 085 0431 1558 36091 2670  STD 0500 1450 3588 2678 0014261 0789 15151  129 085 T0521 1416 35822 2681  STD 0600 1270 3564 2697 0012586 0923 15105  STD 0700 1100 3544 2714 0011036 1041 15060  129 085 0703 1095 35434 2714  STD 0800 0943 3527 2728 0009698 1145 15018  129 085 T0888 0824 35169 2739  STD 0900 0809 3517 2741 0008422 1235 14983  STD 1000 0698 3514 2755 0007021 1312 14956  STD 1100 0698 3514 2755 0007021 1312 14956  STD 1200 0543 3509 2772 0005420 1435 14927  STD 1300 0500 3506 2774 0005158 1488 14926		12	29				_				00.1	6944		2 2 8											
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NDC		CLOUD	WEA-	,	ave 'A'llons	BSER1	0.0	MAX. DEPTH	DEPTH			ORIGIN	the out	YEAR		ATI	STATION	ARE	MARS	POPUL	NGITUDE	LON	DE	LATITU	SHIP	ICE
STATI		TYPE AMT	CODE	- 1	T PER S		DIR	OF S'MPL'S	воттом		TATION UMBER	5.	CRUI	ILAK			MO DAY		10"	NDCNI	1/10		1/10	•	ODE	10.
20		8 3	X1			_	27	38	846			1 00	FI	968	20 1	1	05 16	57	113		757 W	04	N	3500	cs	248
000		כו ס	^1		15	٦۴			NO.	Τ.		AIR TE		BAR	VIND			WAT								
						s	CIAL ATIONS	SPEC OBSERV	OBS. DEPTHS	CODE	WET	DRY	ER	MET	SPEED	IR.	TRANS, DIE	COLOR	ſ							
						4				-	8018	BULB	-	(mb	FORCE	-	-	CDDE	-							
				, .		Ц.			19	7	156	200	0	19	520	6	26				1	-				٦
5104-51	NO3-N	NO2-N			PO4-P	л .	D2 m1/		SOL	∆ 0 N. M	AE E	FIC VOLU	SPECI	A-T	SIGM		s */	°C	T	lm)	DEPTH		CAR	CAST NO.	ESSENGR TIME	- 1
µg - at/1	1\10 - gu	ug - ot/i	g + a1/l	n8	9 - 01/1	- 1		CITY	VELL	103		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			-				-			-			R 1/10	<u> </u>
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									151	34		17130			263		3636	03	18		0020		ST			
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									151	51	00	1718	00		263	,	3636	03 97			0030		51 085		120	
									151 151	86	0.0	1708	00		263 263	6	36356 3636	94			0050		5 T		120	
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									151	66	0.1	15720	00		265		3635	27			0100		ST			
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									151	44	02	10010	00		265	8	36358	17			0151		OBS		120	
									151						265		36349	11	17		10194	,	OBS		120	
									151	23		15702			265		3634		17		0200		ST			
									151	01		15664			265		3627		16		0250		ST			
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									151	66	07	3179	001		268		3585		13		0500		ST			
									151						269	0	35700		12		T0592		OBS		120	
									151			2269			270		3567		12		0600 0700		ST ST			
									150	08	10	0725	001		271	2	3538 35203		10 08		0793		085		120	
									149	09	11	9280	000		273	-	3520		08		0800		ST			
									149		11	7638			2741		3515		07	)	0900	D	ST			
									149			6390		1	276		3512	_	06		1000		ST			
									149						276	5	35115		06		T1000		085		120	
									149		13	5646			276		3509 3506		05 05		1100 1200		ST			
									149	1 1	13	5167	000		277: 2776	3	35043		04		1279		085		120	
									149	28	14	4880	000		2776		3504		04		1300		ST			
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									150	97	19	4568	000		2785		3497	35	03		2500		ST			
									150						2786	3	34958		03		2728	_	OBS		141	
									151	2 <b>2</b>	22	4470	000		2787		3494		029		3000		STO		141	
									151						2788		34919 34895		02		T3406		08S		141	
									152: 152:						2788		34889		02		T3846		085		141	

FERENCE	SHIP	LATITU	OE	LONG	ITUDE I	R 201	SOEN		ION T		YEAR	CPUISE		TION	7	DEPTH TO OTTOM	DEPTH OF			TIONS	THER CODE	CLO	OES			STA Nu	TICN VBER
DE NO.	CODE		1/10		1,10	10"	1*	MD	DAY	R.1, 10		NO.	NU	MBER	В	UHUM	S'MPL	2 D.s	RGT	PER SEA	-			_	_	-	
1240	cc	3500	N.	047	57 W	113	57	05	18	20 1	968	€11	007		4	846	37	19	2	3	X 6	7	9			00	007
11248	CS	3500	IN I	041	, <del>"</del>	1.10		TER	_	VINO	BARG	A !	R TEMP	. °C	VIS	NO.	SPI	CIAL									
							COLOR	TRANS	DIR.	SPEED	METE	R D		WET	consi	OBS. DEPTHS	CACCON	VA TIONS									
							COOE	(m)		FORCE	(mbs			BULB	$\rightarrow$		-										
									19	520	23	1 19	4	189	5	19	L		<u>L</u> _				_			-	
	TIME	CAST NO.	CAR	IO E	DEPTH (m)		r *c	s	٠	SIGM	A - T	SPECIFIC	VOLUM LY-X10 <sup>7</sup>	€ ∑ DY	△ D N. M. 10 <sup>3</sup>		UND	O2 ml		04-8	TOTAL-P			NO3-N ug = at"	NB -	4-5	рН
	HR_1/10			-	0000	1	830	36	20	262	7	0017	1565	0.0	000	15	190					i					
			51		0000		830		383 383	262		VO 1	,,,,	,		-	190										
	12	U	089	7 D	0010		830	36		262		0017	1590	0.0	18	15	192										
				TD	0020		829	36		262		0017	616	0.0	35	15	193										
	12	n	08		0026		829		383	262							194										
	12	•		ΤD	0030		828	36	38	262	8 8	0017	1644	0.0	53	-	194										
				TO	0050		809	36	36	263	31	001	7408	0.0	88		192										
	12	0	08		0052	1	806	36	357	263	31						191										
	-		S	TD	0075	1	1746	36	33	264		0016	5203	0 1	130		177										
	12	0	08	S	0079	1	740		330	264							176										
			S	TD	0100		1731		34	264		001	5897	0 1	170		177										
	12	0	08	S	0106		1729		347	264						_	178										
			S	TD	0125		1729		37	26		001			210		181										
				TO	0150		1730		39	269		001	5676	0.4	249		187										
	12	0	08		0160		1730		394	269		001	. 747	0.	327		191										
				TD	0200		1720	_	37	265		001	5737		406		191										
				TD	0250		1696		32	265 265		001	0101		+00		189										
	12	0	ОВ		10295		1665		269 26	26		001	5512	0.4	484		188										
				TO	0300		1660 1551		07	26			4766		636		169										
				TD	0400		1514		018	26		001	- 100				161										
	12	0	08		T0431		1426		91	26		001	3537	0	777		143										
				TO	0542		1367		828	26						15	130										
	12	20	08	to.	0600		1273		68	26		001	2355	0	907	15	107										
			0B		10656		1182		5555							15	083										
	12	20		TD	0700		1094		47	27		001	070	1	022	15	059										
				TD	0800		0919		31	27		000	899	1	120	15	010										
	12	20	08		0893		0786		201								4974										
	1 4			TD	0900		0779		20	27			7699		204		972										
				TD	1000		0682		16	27	59		6654		276		950										
				TO	1100		0601		513	27		000	5824	1	338		4935										
	12	20	08		11136	•	0576	3 !	5115								4930										
		_	S	TO	1200		0544	_	509		72		543	_	394		4928										
			S	TD	1300		0500	_	505		74		523	_	448		4926										
			S	TD.	1400		0463	_	503		76	000	497	3 1	499		4927										
	1:	20	0.6	3.5	1450		0448		5016		77						4929										
			5	510	1500		0438		501	_	78		487		548 668		4934 4959										
				STD	1750		0398		499		80	000	471	U 1	900		4961										
	1	20	08		T176		0396		499(		80	000	467	0 1	785		4991										
				STO	2000	_	0374		498 497		82	300		~ I	. 0 2		5019										
	1	44	OE		12206		0357		4971 497		85	000	1459	7 2	017	_	5061										
				STD	2500		0313	_	491 496:		87	300					5108										
	1	44		35	2831 3000		0299		470. 495		87	000	450	5 2	244		5130										
				STD	1343		0265	_	492i	_	88	000		- 6			5192										
	- 1	44	Ut	3 S					491		88						5227										
		44	~ .	3.5	1368	1	0248									1	7661										

THY IC	D. (	SHIP	LA TITU		LONGITUOE	MARSDEN SQUARE		TATION 1		YEAR	CRUISE		ATION		DEPTH TO BOTTOM	MAX. DEPTH OF	0.0	WAVE SERVATIONS		CODE		S	NOOC
-+-				1/10	17/10 = 2	10, 1,	+		HR.1/10		NO.	N.	MBER		BOTTOM	S"AA PL"	DIR	HGT PER S	EA CODE	TYPE AN	7	^	NUMBE
31112	48	CS	3500	N	04753 W	113 5				968		008			4810	14	26	1 3	X1	3 6			000
							VATER		WIN D SPEED	BARC	*	IR TEMI		VIS.	NO.	SPE	CIAL						
						COL	OR TR	ANS. DIR.	FORCE	METE (mbs			W E T BULB	con	DEPTHS	OBSERV	ATIONS						
							$\top$	24	512	196	21	7	206	7	14								
	f.,	ESSENGE				T 1	-		1011	1					1			-		_			
		TIME	NO.	CARD	DEPTH (m)	1 °C		\$ 1/4.	SIG M	T = A	SPECIFIC ANOMA		!   ≥ .	YN. N	, 50L	CITY	0 2 ml/1	PO4-P	TOTAL-P	NO2-N	NO3-N	5104-51	
	Н	R 1/10		-		-	-					-	1	x 10 <sup>3</sup>	VELC	70111		yg • e1/1	νg - α1/1	µg - at/*1	µg - a1/l	µg = al/	
										1													
		120		STI		1829		3637	262		0017	664	00	000									
		126		085 5TI	0000 0 0010	1829		36366	262						151								
				ST		1829		637	262		0017			018									
		126		085	0023	1825 1823		3637 36372	262 262		0017	610	0.0	035									
		120		STI		1812		638	263		0017	244	0.0	163	151								
		126		085	0047	1795		6383	263		0017	204	0(	053	151 151								
				STI		1795		638	263		0016	900	0.0	087									
		126		085	0070	1792		6382	263		0010	,,,,	0.	001	151								
				ST	0075	1778		638	264		0016	617	0	129									
		126		085	0094	1740		6378	264				٠.		151								
				STI		1741	3	639	265	0	0015	761	0:	169									
				ST	0125	1744	3	644	265	3	0015	558	0.2	208									
		126		085	0141	1746		6446	265	3					151	90							
				ST		1741		643	265	3	0015	646	0.2	247	151	89							
		126		OBS	T0188	1719	_	6379	265						151								
				STO		1717	-	637	265		0015			326	151								
				STO		1699		634	265		0015			04	151								
		126		ST(	0300 T0378	1666		628	265		0015	504	04	82	151								
		120		510		1582 1543		6138	2661 267		0016	601			151								
		126		085	0473	1428		5894	2684		0014	291	Ue	33									
		120		ST		1398		586	268		0013	214	0-	772	151								
		126		OBS	T0565	1315	-	5745	2696		0013	314	0 4	112	151 151								
				STO		1257		564	2699		0012	329	0.5	900	151								
				ST		1090		538	271		0011			18	150								
		126		OBS	0759	0991		5272	2720				, .	•	150								
				ST	0800	0907		523	273		0009	379	11	22	150								
				STO	0900	0738	3	515	2750	)	0007	422		206	149								
		126		OBS	10947	0676	3	5123	275	7					149								
				ST		0640		512	2762	2	0006	324	12	74	149	33							
				STE	-	0581		510	2768		0005	757	13	35	149	26							
		126		085	1197	0532		5085	2773						149								
				STO		0531		508	2772		0005			90	149								
				510		0490		506	2776		0005	_		42	149								
		126		STO		0459		504	2778		0004	850	14	91	149								
		120		0 <b>B</b> S	T1442	0449	3	5026	2778	•					149	29							

SHIP				GITUDE HAD	MAR	SDEN	STATION T	IME	YEAR	ORIG	STAT		DEPTH CT	06	OBS	WAVE ERVATION	45	WEA-	CDOES		STA	OOC ATION JMBER
CODE	LATI	TUDE	LON	GITUDE	10*		MO DAY			NO.	NUN	BER	BOTTON	A S'MPL'	S DIR.	HGT PER	SEA	CODE	TYPE AM	7	- 1	JIVIDER
-		1/10	-		-	+			968	E11 0	09		4755	42	25	2 3		х6	7 9		0	009
B CS	350	O N	048	300 W	1113	58	05 22	WIND		A 12 1	TEMP.		NO.	T		1- 1- 1						
						-		SPEED	METE	-		/ET COD	OBS.	OPERAL	CIAL VATIONS							
						COLOR	TRANS. DIR.	FORCE	(mbs		В	ULB .	OEPTH	3								
							25	520	180	200	1	94 6	19	<u> </u>		_	_				1	
MESSEN TIME HR 1/	GR CAS	T CA		DEPTH (m)		1 °C	5 *4.	SIGA	t-An	SPECIFIC VO	LUME -x10 <sup>7</sup>	₹ ∆ 0 DYN. W x 10 <sup>3</sup>	. SC VEI	LOCITY	02 ml/l	PO 4- y g - al		TAL→P g - ot/f	NO2-N ug = 01/1	NO3-N	\$1 04-51 ug = 01/1	pН
TIK 1/	10									00106	7.2	0000	16	203		}	1					
			TD	0000		874	3638	261 261		00186	13	0000		203								
12	20	08		0000		874	36376 3638	26		00186	33	0019		204								
		_	TD	0010		872 1870	3639	26		00185		0037		205								
	• •		TD	0020 0026		1869	36393							206								
13	20	08	TD	0026		1853	3639	26		00181	42	0056		5202								
			STD	0050		1794	3640	26		00167		0091	. 15	188								
1	20	08 08		0051		1792	36398							5188								
1.	20		,TD	0075		1771	3643	26	46	00160	76	0132	-	186								
1	20	08		0078		1768	36436				_			5186								
-			570	0100		1741	3640	26		00156	93	017		5181								
1	20	08	3.5	0103		1738	36394					0.22		5180 5184								
			STD	0125		1737	3641	26		00156		0210		5187								
			STD	0150		1733	3642	26		0015	774	024		5187								
1	20		35	0154		1732	36419	26 26		00159	328	032		5189								
_	• •		STD	0200		1713 1710	3638 3637			5015	, 20	0,72		5189								
1	20		35	T0206 0250		1649	3624	_	60	00152	44	040	4 1	5176								
			STD STD	0300		1584	3612		66	00148		047	9 1	5163								
			STD	0400		1465	3593		78	00139	924	062		5140								
	20		85	10408		1456	3591	3 26	79					5138								
	20		STD	0500		1362	3583	26	93	0012	789	075		5122								
1	20		85	0509		1353	3581		93					5120								
-			STD	0600		1256	3567	_	02	0012	091	088		5101								
1	20	0	BS	T0610		1243	3565		03				_	5098 5038								
			STD	0700		1035	3547		28	0009		099 107		4989								
			STD	0800		0864	3532		45	0008	000	101		4983								
1	20		85	0816		0842	3530		47	0007	414	115		4977								
			STD	0900		0789	3526		151 157	0006				4966								
			STD	1000		0721	3520 3519		75 <b>8</b>	0000	,,,			4964								
1	20		85	T1023 1100		0630	3515		765	0006	100	129	_	4946								
			STD	1200		0549	3511		772	0005	-		9 1	4930								
,	120		85	1290		0493	3507		176			-		4922								
,	120		5 <b>T</b> D	1300		0490			776	0004				4922								
			STD	1400		0459			778	0004			-	4926								
			STD	1500		0431	3501		778	0004	789	149		4931								
1	120		85	11561		0416			779					4935								
			STD	1750		0402			780	0004				4961								
			STD	2000		0382			782	0004	659	173		14995 15051								
:	143	C	85	T 24 20		0346			786	0001	1. 4 0	196		15051								
			STD	2500		0338			786	0004		_		15128								
			STD	3000		0292			788 788	0004	126	210		15137								
	143		85	3070		0286			789					15230								
	143	C	85	3715 4000		0240			790	0004	186	260		15275								
			STD			0225			790					15280								
	143		85	T4031										1 7200								

- 1		3502		- '1/10 4811 W	113				1968	NO.		WBED		BOTTOM	S'MPL"	S DIR.	THORE	PER SEA	CODE	TTPE AM	ч	- 1	NUMBER
M	TIME OF	CAST		4811 W	1113	,		186 🛚	1968	E 1 11					1	1		_			T		
- 1	TIME OF					WA1			1 700		010		14	+297	16	20	1  3	3	X1	4 5		1	0010
- 1	TIME OF					-		SPEED	BAR	) ·	RTEMP		vis.	NO. OBS.	SPE	CIAL							
- 1	TIME OF		2105			COLOR	TRANS. DIR.	OR	(mbi			WET BULB	CODE	DEPTHS	OBSERV	ATIONS							
- 1	TIME OF					-	16	1	200				7	14									
- 1	TIME OF					<u></u>	10	312	201	0 21	1 .	<del></del> 1		14									
н		NO.	CAPO	DEPTH II	n) T	~	\$ 14.	SIGA	AA-T	SPECIFIC ANOMA	VOLUMI	DY!	Δ. Q.		IND	02 ml/l			101AL-P	NO2-N	NO3-N	\$104-5	
			TYPE							ANUMA	(1-110-	x	103	VELC	CITY		₽ B	- 01/1	νg = α1/1	1/10 - gu	µg = 01/1	yg - al/	4
																			,				
		'	STD	0000	) 1	871	3639	26	17	0018	520	00	00	152	202 '						'		
	186		OBS	0000	1	871	36387	26	17					152	202								
			SID	0010		863	3639	26	20	0018			18	152									
			STD	0020		850	3639	26		0018	042	00	37	15									
	186		085	0025	_	843	36394	262							198								
			STD	0030		830	3638	263		0017	692	00	54	151									
	186		OBS	0049	_	794	36350	26:							187								
			STO	0050	-	794	3635	263		0017	125	00	89	151									
	186		085	0074		780	36362	263							188								
			STD	0075	_	777	3636	263		0016	739	01	32										
	186		085	0096		730	36342	264		0015					177								
			510	0100		729	3634	264		0015		01		151									
	186		ST0 085	0125 0146		722 715	3635 36359	269 269		0015	686	0.2	12	151									
	100		STD	0150		714	3636	265		0015	650	02	51	151	180								
	186		085	T0195	_	696	36331	265		001)	,,,	02	71		182								
	100		STD	0200		696	3633	269		0015	499	03	28	151									
			STD	0250		679	3630	269		0015			06		186								
			STD	0300		639	3624	266		0015		04			181								
	186		085	T0389		513	36016	26							154								
			STD	0400		478	3595	26		0014	056	06	29	151									
	186		085	0490		283	35610	269							91								
			STD	0500	1	281	3563	269	94	0012	611	07	62	150	92								
	186		085	10594	. 1	261	35685	270	02					151	102								
			STD	0600		248	3567	270		0011			85		98								
			STO	0700		047	3539	27		0010			97	150									
			STO	0800		885	3521	27:		0009	157	10	95		996								
	186		OBS	0810		871	35198	27							992								
			STD	0900		773	3518	274		0007			79		969								
	100		STD	1000		682	3516	279		0006	654	12	51		950								
	186		085	T1026		661	35157	270		000					946								
			STD	1100		623	3514	276		0006		_	15		943								
			STD	1200 1300		571 519	3512 3509	27		0005			73		939								
	186		085	1300		518	35090	27°		0005	1 76	14	27		934								
	190		510	1400		518 478	35090	27		0004	04/	9 4	70		934 934								
			5T0	1500		444	3503	27		0004			78 27		936								
	186		085	T1577		422	35004	27		5554	020	10	21		940								

V

REFERENCE	- SH		- 1	LONG	ITUDE 1/10	MARS SQU	ARE	STATI	ON TI		YEAR	CRUIS		TOR'S ATION UMBER		TO TO TO	MAX. DEPTH OF S'MPL'S	1	WAV ERVA	E TIONS ER SEA	THER	CLO	230		STA NU	TION M BER
			1/10				1	-			1968	FI	011		38	304	15	29	1 3	1	×1	8	3		0	011
31124	8 C	5   350	INI	048	09 W	113	WAT			VIND	BAR	1	AIR TEN			NO.	SPE	CIAL	ĺ							
							COLOR	TRANS.	DIR.	SPEES	MET	ER	DRY	WET	CODS	OBS.	OBSERV									
							CODE	im!	DIK.	1080		_	BULB		-	-										
									32	510	24	0	194	156	7	14			Ц—			1	-			
	MES	SENGE CAST	CA		QEPTH (m)	,	°C	s	٠/	SIC	MA-T	SPECI	FIC VOLUE		∆ D YN. M x 10 <sup>3</sup>	SOU VELO	IND	0 2 m1/		- 01/I	TOTA L=8 ug = 01/1			NO3-N	SI O4 - Si µg = a1/1	pΗ
	HR	ME OF NO.	TY	PE				-		-		├-		+	X 10-		-		-			1-	_			
			T									100	18494	٠,	000	152	201		1	1		1	,	,		
	'	•		TD	0000		869	363 363			518 518	00	1647	• 0	000	152										
		190	08		0000		869 854	363			521	0.0	1823	3 0	018	151										
				TD	0010	_	842	361			523		1804		037	151	197									
			08	T D	0025		836	-	361		524					151	196									
		190		TD .	0030		834	36			524	00	1794		054		196									
			_	TO	0050		817	36	35	26	528	00	1766	3 (	090		194									
		190	08		0051	1	816	36	350		528						194									
		• / •	S	Tρ	0075	1	778	36			538	00	1683	5 (	1133		187									
		190	08	5	0076		776	-	347		638				174		187 178									
			5	TD	0100		734	36	-	_	648	00	1595	2 (	174		178									
		190	08	-	0101		733		342		648 651	0.0	1570	1 (	214		179									
				TD	0125		722	36 36	-		654		1555	_	253		180									
			_	TD	0150		712 1711		22 354		654	-					180									
		190	08	TD.	0153 0200		695	36			657	00	1545	4	330	15	183									
		190	08		10203		694		332	_	657						183									
		190		TD.	0250		1674		30		659		1537	-	040 <b>7</b>	_	184									
				TD	0300		1637	36	23	2	662		1520		0484		181									
			-	TD	0400		1509	36	01		675	00	1428	6	0631		155									
		190	06		T0407		1497	-	993		676						152									
			9	STD	0500		1301		65	_	691	00	1286	4	0767		099									
		190		35	0509		1289		631		692	0.4	01203	4	0892		099									
				570	0600		1252		67	_	702 705	01	J1203	•	,,,,,,		098									
		190		35	T0611		1242		671 43		719	0	01048	7	1004		048									
				510	0700		1066 0893	-	23		733	-	00914		1102	14	999									
		100		5 T D 3 S	0800 0816		0868		206		735				-		992									
		190		5 T D	0900		0742		12	-	747	0	00770	13	1187	-	957									
				510	1000		0627		06		759	0	00651	75	1258		927									
		190		85	T1021		0608		05		760			_		_	923									
		170		5 T D	1100		0573	35	07	_	766		00586		1320	-	4923									
				570	1200		0533		808		772	0	00539	53	1376		4923									
		190		85	1275		0505	-	08		2776	_					4924									
				510	1300		0496	-	508		2776		0049		1428	_	4925 4928									
				STD	1400		0464		506		2779	_	0047		1524		4933									
				570	1500		0435	-	503 501	-	2779 2779	U	0046	7 [	1924		4934									
		190		85	T1528																					

SHIP	LATITU		MC-INDE PAR	MARSDEN SOUARE	STATION T	ME	YEAP	CRUISE	STATIOI		DEPTH TO	MAX. DEPTH OF	OBSE	WAVE RVATIONS		CLOUD		S:	NODC
		1.10	11 10	10" 1"	MO DAY F	P,1/10		NO.	NUMBE	R	BOTTOM	S'MPL'S	DiP	HGT PER S	EA CODE	TYPE A.M	Ť	N	UMBE
C5	3459	N 04	759 W	113 47		133 1	968	E11 01			4390	37	17	1 3	× 1	0 4			001
				WAT		SPEED	BARO-	-	MP. C	VIS	NO.	SPEC	TAL						
				CODE	TRANS DIR.	OP FORLE	METER (mbs)	DRY	WET	COD	DEPTHS	OBSERV	A TION S						
					18	520	217	211	189	7	19								
					1.0	102			-		1 1				T				
MESSENGR TIME	LCAST NO.	C ARD TYPE	DEPTH (m)	1 °C	5 %.	SIGM	A-T	ANOMALY ->	UME :102	≨ Δ D DYN, M	- SOL	OCITY	O 2 m1/1	PO4=P	101AL~P	NO2-N #g = 01/I	NO3-N	\$1 O4-\$1 yg + 01/1	, p,
HR 1/10						-			-	x 10 <sup>3</sup>	-	-		-	py - 0.71	pg - 001	µg - 01/1	pg • 6171	-
	1 1		0000	1000	24.1	340		001750						ł					ĺ
133		SID	0000	1838	3641	262		001753	8 (	000	151								
1 9 5	,	085 STD	0010	1838 1837	36413 3641	262		001754	7 6		151								
		STO	0020	1835	3641	262 262		001754		018	151 151								
133	ı	085	0022	1835	36410	262		001756	0 (	0 3 5	151								
1 ./	'	51p	0030	1830	3641	262		001747	5 (	053	151								
133		085	0045	1807	36410	263		201141	, (	ور د.	151								
		STO	0050	1784	3639	263		001659	19 r	087									
133		OBS	0068	1738	36383	265		/	- (		151								
		STD	0075	1745	3641	265		001562	8 6	127									
133	i .	OBS	0089	1754	36455	265			-		151								
		SID	0100	1752	3645	265		001555	7 0	166									
		STO	0125	1746	3645	265		001551		205	151								
133		085	0125	1746	36453	265	3				151	87							
		STD	0150	1734	3642	265	4	001555	6 0	244	151	87							
133		085	10177	1719	36380	265	4				151	87							
		STD	0200	1717	3637	265	4	001569	3 (	322	151	90							
		STO	0250	1699	3633	265		001573		400	151	92							
		510	0300	1660	3627	266		001543	9 0	478	151	88							
133		085	10357	1593	36155	266					151								
		STO	0400	1510	3602	267		001423	5 0	627	151								
133		OBS	0445	1439	35912	268					151								
3.00		SID	0500	1390	3584	268		001329	3 (	764	151								
133		OBS	70539	1346	35784	269					151								
		STD	0600	1236	3565	270		001184		890	150								
122		STD	0700	1069	3547	272		001025	0 1	000	150								
133	1	085	0737	1011	35418	272					150								
		STO	0080	0913	3535	273		000860		095	150								
133		5TD 085	0900 10948	0780 0726	3525 35218	275		000734	<b>ゥ 1</b>	174	149								
133	'	STD	1000	0682	35218	275		000431	, ,	24.2	149								
		STD	1100	0608	3516	276 276		000636 000570		243 303	149								
		510	1200	0545	3512	277		000570		358	149								
133		085	1213	0538	35112	277		000722	· 1	200	149								
• 22		STO	1300	0498	3508	277		000498	۷ ۱	409	149								
		STO	1400	0460	3504	277		000496	_	458	149								
133		OBS	11461	0440	35028	277			- 1	,,,,	149								
		STD	1500	0437	3503	277		000473	9 1	506	149								
		STO	1750	0419	3503	278		000475	_	625	149								
		STD	2000	0398	3502	278		000471		743	150								
154		085	T2029	0395	35021	278			^		150								
		STO	2500	0347	3500	278		000452	8 1	974	150								
154		085	2614	0334	34990	278		_	-		150								
		STD	3000	0284	3495	278		000427	7 2	194	151								
154		OBS	13200	0264	34935	278					151								
154		OBS	T3568	0237	34921	279					152								
154		085	T3664	0233	34912	279					152								

10. 00	HIP IDE	LATITU		TONGITUDE 1	MARSDE	EN IE	STATION T		YEAR	CRUISE NO.		TOR'S ATION IMBER		DEPTH TO DITOM	MAX. DEPTH OF S'MPL"		WAVE ERVATIONS	0.01	P C	OUD ODES			NODC STATION NUMBE	
NO.			3/10	1/10	10	1.	MO DAY			_		MBEK	-		1	_	HGT PER S	1.0	1177	_				-
248 C	5	3500	N C	4800 W	113 5		05 27		968		O13	a to I	- 4	297	39	23	1 3	X ]	7	7			001	5
						OLOR ODE		SPEED OR FORCE	M ETI (mbs	ER	DRY ULB	WET BULB	VIS.	NO. OBS. DEPTHS		CIAL /ATIONS								
							23	515	17	3 2	11	183	7	20										
84.65	SENGR							1		586 (1516	C VOLUM		2 D.	SOI	IND		PO4-P	TOTAL-	e NO	2-N	NO3-N	5104-	5.	
,	IME 0	NO.	CARD	DEPTH (m)	1 7	C	s ·/.	SIGN	4 A - T	ANON	ALY-XIO	, DAI	10 <sup>3</sup>		CITY	0 2 ml/l	pg - al/l	μg - ο1		ot/I	1/10 - gu	yg - 01		1 3
HR	1/10				-		1	+				_												$\neg$
		-	510	0000	185	54	3642	262	4	001	7871	00	00	151	197		1	1	1				1	
	121		085	0000	185		36420	262						15										
			510	-	185		3642	262		001	7906	0.0	18	15	199									
			STO		185		3642	262	25	001	7894	0.0	36	157	200									
	121		085	0027	185		36419	262							201									
			510		184		3642	262			7845	0.0		15										
			STO		183		3642	262		001	7638	00	89	152										
	121		085	0055	183		36416	262 264		001	5965	01	21	157										
			510	0075 0082	174 173		3637 36368	265		001	2762	01	<b>9</b> I		175									
	121		08S		173		3640	265		001	5554	01	71		179									
	121		085	0110	17:		36415	265							181									
	1.2.1		510		17		3641	265		001	5474	02	09		182									
			510		172		3639	265			5541	0.2	48	15	184									
	121		085	0164	172	21	36389	265	5 5						185									
			510	0200	171		3638	265		001	5591	03	26	15										
	121		OB5	T0218	171		36381	265					_		191									
			510		169		3634	265			5592	04			191									
			STO		165 154		3627 3606	266 267			5394 4598	04			187 165									
	121		5T0	T0441	147		35952	26		001	4 2 7 0	00	<i>5</i> 1		150									
	121		STO		134		3573	268		001	3067	0.7	70		113									
	121		085	0551	124		35600	269							089									
			510		119		3556	270	05	001	1764	08	94	15	079									
	121		085	10662	112	28	35513	271	14					150	065									
			510	0700	10.		3547	272			0287	_	04		050									
			570		09:		3536	273		000	8853	11	00		015									
	121		085	0897	081		35280	274		000	75.00				986									
			STO		080		3528	279			7588		82 52		9 <b>85</b> 959									
			5 T (		070 061		3522 3516	276 276			16503 15749		14		939									
	121		085	T1137	051		35143				J 1 7 7		. 7		934									
			570		054		3511	27		000	5329	13	69		929									
			570		049		3507	27		000	5057	14	21	14	926									
			510		04		3504	27		000	4850	14	71		926									
	121		085	1442	044		35033								927									
			510		04:		3501	27			4888		19		934									
			570		040		3500	27		000	4742	10	40		962 962									
	121		085 085	T1751 T1769	040		34999 35002								966									
	100		5 <b>T</b> (		03		35002	271		000	4609	17	56	-	994									
	166		085	2294	039		34993					• '	. •		032									
			510		034		3498	271		000	4569	19	86		062									
	166		OBS	2826	03		34967	271	87						107									
			510		029		3495	278		000	4368	2.2	09		127									
	166		085	T3370	029		34927								174									
	166		085	T 3779	02:		34913								236									
	166		085	T3878	02	28	34908	279	90					15	253									

Table VI.—Observed and interpolated oceanographic data for stations taken by USCGC SEBAGO at Ocean Station ECHO, 28 May-19 June 1968, prepared from NODC listing No. 31-1273

		SHIP	LATITU	DE 1/10		SITUDE		RSOEN UARE		IDN T	IME 18,1/10	YEAR	C R U	158	IATOR'S	N		O	MAK. DEPTH OF S'MPL'S			/E TIONS		WEA- THER	CLC	OES			NODC STATION STATION	
	-		2501		04.0			-				1060	+	_			200	-	-		100			<u> </u>					0001	┪
3111	2/3	55	3504	N	048	04 W	1113		TER		189 WIND			2 00	MP, °C		384	7	16	34		4	2	X 1	6	6			0001	ı
								-	R IRANS	DIR	SPEFO OR FORCE	1414.11	R	DRY BULB	W E1	COD	, J U 8	0.0	SPEC DBSERVA											
										32	507	18	6	207	16	9 7	14	4												
		MESSENGR TIME HR 1/10		CAR		DEPTH IN	5)	ī °c	s	٠	SIG	MA-T		IFIC VOLI	/mt	≨ △ 0 DYN. A x 10 <sup>3</sup>	۸. ا	\$0U1		0 2 ml/l		D4=8 - 01/1		A L - P - 01/1	NO2		NO3-N ug - 01/I	\$1 Q4-5 yg = 01/		
		-																												
				5	TO .	0000	. 1	851	364	44	26	26	00	1765	4 (	0000	) [	151	97											
		189	,	083	5	0000	1	851	364	440	26	26						151	97											
				S.	TD	0010	1	851	36	44	26	26	00	1767	9 (	0018		151	98											
				S.	TD	0020		850	36	44	26	27	00	1770	5 (	0035		152												
		189	)	083		0025		850	36	440	26							152												
					TD	0030		849	36		26		00	1771	2 (	0053		152												
		189	•	083	S	0049		828		433	26							151												
					TD	0050		825	36		26		00	1728	0	3088		151												
		189	,	08		0073		762		363	26							151												
					TO	0075		758	36		26		0.0	1629	4 (	3130		151												
		189	)	08		0097		727		344	26				_			151												
					TO.	0100		1730	36		26			1572		0170		151												
					TO	0125		1747	36		26		00	1577	3 (	209		151												
		189	,	08		0146		1751	-	449	26		00	1676				151												
					TD	0150		749	36		26		00	1576	0 (	0249		151												
		189	,	08		T0195		1724		388	26		00	1677				151 151												
					TD TD	0200		1724	36°		26 26			1577		0328 1408		151												
					TO	0300		1679	36.		26			1610		0488		151												
		189	,	08:	_	0386		1569		115	26		00	1610	2	J 4 0 0		151												
		10:	,		TO	0400		1533	36		26	_	0.0	1459	0	0642		151												
		189		08		0484		1364		725	26		00	147)		0042		151												
		10	,		TD	0500		1348	35		26		00	1330	2	0781		151												
		189	•	08		T0583		1261		578	27		00	1000	-			151												
		10.	•		ŤD	0600		1242	35		27		0.0	1196	2	0908		150												
					TD	0700		1120	35		27	-		1118		1023		150												
		189	9	08		0793		991	-	334	27		-					150												
					TD	0800		981	35		27		0.0	0999	2	1129		150												
				-	TD	0900		824	35		27			0834		1221		149												
					TD	1000		651	35		27			0648		1295		149												
		189	9	08		T1008		0636		110	27		-		_			149												
		189		#5		1279		508		062	27		00	0523	0	1459		149												
		189		*5		1552		0440		013	27			0494		1597		149												

SHII COD		1/10 LC	NGITUDE 1/10		EN STATION E IGMT	YEAR		TION MRER	DEPTH DEPTH		WAVE ERVATIONS HGT PER SE-	WEA THER COD	TTPE AM		STA	ODC ATION JMRER
73 55	35	57 N 04	754 W	113 5	57 05 29	124 1968			4755 14	06	2	! X1	8 2		0	002
					WATER	WIND BAI		VIS.	NO. SPE	CIAL						
					ODE TRANS. DIR			WET COD	DEPTHS ORSERY	ATIONS						
				-	11	1000		140 8	14							
					, 11	309 20	101		L							
MESSE	NGR CA	ST CARO	DEPTH IMI	1 7	c s */	SIGMA-T	SPECIFIC VOLUMI	E Ž △ D	SOUND	0 2 ml/l	PO4-P	TOTA L-	NO2-N	NO3-N	SI D4-51	ρН
HR 1	/10 N	O. TYPE					ANGWALT-110	x 10 <sup>3</sup>	, AEFOCIAA		µg = α1/1	yg - a1/l	νg - αt/l	µg + 01/1	μg - ot/1	
									1							
•		STO	0000	184		2621	0018136	0000	15194							
1	24	085	0000	184					15194							
		510	0010	184		2621	0018155	0018	15196							
		STD	0020	184		2622	0018173	0036	15197							
1	24	OBS STD	0025 0030	184 184		2622 2623	0018124	0054	15198 15199							
,	.24	085	0048	184			0018124	0054	15202							
	. 2 -	STD	0050	184		2626	0017842	0090	15202							
,	24	085	0072	183			0017642	0090	15204							
-	27	STD	0075	182		2631	0017464	0135	15203							
1	24	085	0096	178					15193							
-	-	sto	0100	177		2642	0016560	0177	15191							
		STO	0125	172	25 3633	2649	0015915	0218	15179							
1	24	085	0142	170	00 36307	2653			15175							
		STD	0150	169		2654	0015550	0257	15175							
1	24	085	70190	167					15173							
		STD	0200	166		2659	0015226	0334	15173							
		STD	0250	163		2663	0015034	0410	15170							
		STD	0300	158		2668	0014697	0484	15164							
1	.24	08S STD	T0368 0400	150 145		2676 2681	0013670	0626	15149 15136							
,	24	085	0463	136	_		0013670	0026	15115							
1		STD	0500	132		2693	0012679	0758	15109							
1	24	085	T0553	127				Ų. JO	15098							
•		STD	0600	119		2706	0011615	0879	15078							
		STD	0700	104		2721	0010254	0988	15040							
1	.24	OBS	0733	099					15029							
		STO	0800	091	12 3535	2739	0008587	1083	15008							
		STO	0900	079		2754	0007144	1161	14980							
	24	085	10908	078					14977							
1		STO	1000	069	90 3522	2763	0006336	1229	14954							
1							0005794	1289	14936							
		STO	1100	060		2768	****									
	24	STD 085	1166	055	59 35099	2770		101-	14928							
	24	STD 085 STD	1166 1200	055 053	59 35099 39 3509	2770 2772	0005356	1345	14926							
	24	STD 085	1166	055	59 35099 39 3509 94 3507	2770		1345 1397 1447								

	ID.	SHIP	LATITUI		LONGITU	10.4	sat	SDEN JARE		ION T		YEAR	CRUIS		TATION		DEPTH TO BOTTOM	MAX. DEPTH OF	1. "	WAVE SERVATI	045	WEA- THER CDDE	CODES		S1	NODC 'ATION UMBER
-				1/10		1/10	10*	1.			R,1/10		ND.		IU MBER			SMPL	1	NGT PE	* SIA	A	TYPE AM	t	-	
310	273	\$5	3645	N	04909	Wi	113					968	Ela			, , , ,	5303	01	08		1	X1	6 6	1	1.0	0003
								CDLO	TER TRANS	DIR.	SPEED	BARC	R	AIR TE	WET	VIS.	NO. OBS. DEPTHS	SPE	CIAL 'ATIONS							
								CODE	(m.)	-	FORCE	(mbs		81118	BULB	-										
			, ,				-,		4	13	515	301		174	146	7	06	L.,		L,					,	
		MESSENGE TIME HR 1/10	F NO.	CA		PTH (m)	'	, <u>,</u> C	s	٠/	SIGM	A-T		MALY-XI	07 D	∆ 0 M , NY X 10³		DCITY	D <sub>2</sub> ml/	PO 4		101AL-P		NO3-N NG - 01/1	\$1 D 4 - \$1 yg - qt/1	рН
		'				000		828	364	+1	263	0	001	729	2 0	000	15	190		'				•		
		126	5	08		000		828		14	263							190								
						010		828	364		263			735		017		192								
						020		827	364		263		001	736	в о	035		193								
		126	•	OB		024		826		406	263							193								
		126	,	0B	_	030 049		824	364		263		00	1739	4 0	052		193								
		120	,			050		816 814	364	396	263 263		001	723	٠ ،	087		194 194								
		126		08	-	073		765		404	264	-	00.	123	• •	00 /		184								
		120	,			075	_	761	364		264	-	001	604	5 0	128		183								
		126	5	08		097		723		400	265	_		.004	, ,	120		175								
		•••				100		719	364		265	-	001	1518	4 0	167		174								
						125		697	36		266			1490		205		172								
		120	5	08		145	_	693		350	265				- •			173								

			= 5		STATION II				OFFIH							
311273   55   3640 N   04913 W   113   69   06   01   133   1968   E12   004   4958   14   14   1   X2   4   8   00004	CTRY IO. COOK		MGIIODE S						*****	OF		CODE				
WALKE   WIND   COLOR   WALKE   WIND   COLOR   WALKE   WALK   WA	217272 66 2						<del>                                     </del>						1	1		2004
The column   Column	3111273 32 3	640 N   04	•913 W			UND	A ID TEAS	P. *C	·			1 12	4 10	1	,	70041
18   12   217   207   1916   13   1014   15   15   15   15   15   15   15						SPEED MET	ER ORY	WET COD	085.		s					
STD   0000   1838   3641   2627   0017574   0000   15193   15195   1				CODE	Im I		e) BULB	BULB	DEFINS							
STD   0000   1838   3641   2627   0017574   0000   15193   15195   1					18	512 21	7 207	191 6	13							
STD   0000   1838   3641   2627   0017574   0000   15193   15195   1	MESSENGR	CAST CARO	OFFIH Imi	1 %	5 %.	SIGMA_T					PO4-P	FOTA L-P	NO2-N	NO3-N	5104-51	
133		NO. TYPE	0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			3,0,11,74=1	ANOMALY-XIO		VELOCIT	ту 0,7	μg = α1/I	#9 = 01/t	μg = et/l	ا/10 - وير	µg - 01/	, ,
133										-						
STD   O010		STD	0000	1838	3641	2627	0017574	0000	1519	3	, ,					
STD   0020	133									-						
133																
STD   0030   1831   3640   2628   0017571   0053   15196	122						0017585	0035								
133	199						0017571	0053								
STD	133							3022								
133		STD	0050	1814	3640	2632	0017251	0088	1519	4						
STD   0100   1742   3641   2651   0015651   0169   15181   STD   0125   1728   3641   2654   0015412   0208   15181   133   085   0142   1719   36409   2657   15182							0016255	0129	1518	5						
STD   0125   1728   3641   2654   0015412   0208   15181   15181   15181   STD   0150   1716   3640   2657   15181	133															
133																
STO   0150   1716   3640   2657   0015284   0247   151822   15182   15182   151822   15182   15182   15182   15182   15182   15182   15182   15182	122			_			0015412	0208								
133	155						0015284	0247		-						
STD   0200   1681   3634   2660   0015082   0322   15179	133							0241								
STD   0300   1560   3612   2672   0014292   0470   15156     133   OBS   T0361   1480   35999   2680     15139     STD   0400   1427   3593   2687   0013123   0607   15128     133   OBS   0451   1352   35842   2696     15110     STD   0500   1274   3575   2704   0011602   0730   15091     133   OBS   70534   1215   35683   2711     15076     STD   0600   1070   3551   2725   0009748   0837   15034     133   OBS   0695   0885   35331   2742   14980     STD   0700   0875   3533   2744   0007922   0925   14977     STD   0800   0705   3527   2764   0005879   0994   14928     133   OBS   T0869   0622   35234   2773   2774   0005014   1049   14908     STD   1000   0587   3520   2775   0004975   1099   14913     STD   1100   0555   3516   2776   0004950   1148   14917     STD   1200   0518   3511   2776   0004925   1198   14918	_	STD	0200	1681	3634	2660	0015082	0322								
133				1623	3623		0014731	0397	1516	8						
STD 0400 1427 3593 2687 0013123 0607 15128 133 085 0451 1352 35842 2696 15110 STD 0500 1274 3575 2704 0011602 0730 15091 133 085 70534 1215 35683 2711 15076 STD 0600 1070 3551 2725 0009748 0837 15034 133 085 0695 0885 35331 2742 14980 STD 0700 0875 3533 2744 0007922 0925 14977 STD 0800 0705 3527 2764 0005879 0994 14928 133 085 70869 0622 35234 2773 14906 STD 0900 0615 3523 2774 0005014 1049 14908 STD 1000 0587 3520 2775 0004975 1099 14913 STD 1100 0555 3516 2776 0004950 1148 14917 133 085 1114 0550 35155 2776 STD 1200 0518 3511 2776 0004925 1198 14918							0014292	0470								
133	133						0010100	0407								
STD 0500 1274 3575 2704 0011602 0730 15091 133 0BS 70534 1215 35683 2711 15076 STD 0600 1070 3551 2725 0009748 0837 15034 133 0BS 0695 0885 35331 2742 14980 STD 0700 0875 3533 2744 0007922 0925 14977 STD 0800 0705 3527 2764 0005879 0994 14928 133 0BS 70869 0622 35234 2773 STD 0900 0615 3523 2774 0005014 1049 14908 STD 1000 0587 3520 2775 0004975 1099 14913 STD 1100 0558 3516 2776 0004950 1148 14917 133 0BS 1114 0550 35155 2776 STD 1200 0518 3511 2776 0004925 1198 14918	122						0013123	0607								
133	1,73						0011602	0.730								
133	133															
STD 0700 0875 3533 2744 0007922 0925 14977 STD 0800 0705 3527 2764 0005879 0994 14928  133 085 70869 0622 35234 2773 14906 STD 0900 0615 3523 2774 0005014 1049 14908 STD 1000 0587 3520 2775 0004975 1099 14913 STD 1100 0555 3516 2776 0004950 1148 14917  133 085 1114 0550 35155 2776 STD 1200 0518 3511 2776 0004925 1198 14918		STD	0600	1070	3551	2725	0009748	0837	1503	4						
STD 0800 0705 3527 2764 0005879 0994 14928  133 085 T0869 0622 35234 2773 14906  STD 0900 0615 3523 2774 0005014 1049 14908  STD 1000 0587 3520 2775 0004975 1099 14913  STD 1100 0555 3516 2776 0004950 1148 14917  133 085 1114 0550 35155 2776 0004925 1198 14918	133															
133																
STD 0900 0615 3523 2774 0005014 1049 14908 STD 1000 0587 3520 2775 0004975 1099 14913 STD 1100 0555 3516 2776 0004950 1148 14917 133 085 1114 0550 35155 2776 14917 STD 1200 0518 3511 2776 0004925 1198 14918					_	-	0005879	0994								
STD 1000 0587 3520 2775 0004975 1099 14913 STD 1100 0555 3516 2776 0004950 1148 14917 133 085 1114 0550 35155 2776 STD 1200 0518 3511 2776 0004925 1198 14918	133						0005014	1040		-						
STD 1100 0555 3516 2776 0004950 1148 14917 133 085 1114 0550 35155 2776 14917 STD 1200 0518 3511 2776 0004925 1198 14918																
133 085 1114 0550 35155 2776 14917 STD 1200 0518 3511 2776 0004925 1198 14918			-	-				-		-						
	133															
STD 1300 0475 3505 2777 0004888 1247 14916		STD	1200	0518	3511		0004925	1198	1491	8						
							0004888	1247								
133 085 71377 0439 35001 2777 14913	133	085	T1377	0439	35001	2777			1491	3						

REFERENCE TRY IO.	SHIP	LATITU	DE 1/10	LONGITUDE	200	QUARE		(GM	Ţ1	YEAR	CRUISE NO.	STA	TION	10	DEPT	H OB	SERVAT	IONS	THER	-			NODE STATION NUMBER
311273	3 55	3641	N	04914 W	11	3 6	9 06	0.2	132	1968	F 12	005		5121	1:	1 14	1	2	¥6		+	+-	0005
JIHE .	7 32 1	3041		0.714 #	1 1	-		T	WINO	-	1 01		7	-	T		1	-	7.0	1 2 10	1		3003
						COL	OR TRAM		5. 00	MET	ER DE		MET COS	0.00	OBSE								
							_	19	-			6 1	91 5	14	-								
	MESSENGR TIME HR 1/10	U NO.	CAF		m)	T °C		5 *4.	510	1-AM			DIN. A	A		0.2 m1′				NO7-N ug - nt, l	NO 3-11	\$1104=5 ug + ot/	
			5	rp 0000	,	186	9 34	5.6.1	26	. 25	0017	921	0000	15	106								1
	132	,	085			_					0017	021	0000										
	136		5								0017	780	0015										
			s.			-																	
	132	<u>:</u>	085																				
			51		0	183	8 36	42	26	85	0017	593	0053										
	132	?	083	004	7	182	3 36	422	26	32				15	196								
			Si	rb 0050	)	181				34	0017	141	0088	15	195								
	132	?	OB:																				
			S.								0016	130	0130										
	132	!	OB:								0015												
			51																				
	132	,	51 083								0015	151	0207										
	150		SI								0015	030	0245										
	132	,	085								0015	050	0243										
	• • • •		51	_		_			_		0015	182	0321										
			51						_														
			51	_				_							-								
	132	•	08																				
			51	0400	)	147	7 35	99	26	086	0013	744	0618	15	144								
	132	•	085	0439	9	141	3 :	894	26	87				15	128								
			51		)	130	3 35	70	26	95	0012	541	0749	15	100								
	132	!	083			-																	
			51								0011	119	0868										
	132	!	OB:												_								
			51																				
	132	,	51 085	-				_	_		0007	103	1051										
	136	•	51								0005	010	1111										
			51	_		-	The content of the																
	132	,	08			SOUNE   COM1																	
	100	•	S1					510	27	776	0004	760	1219	1 14	897								
			S																				
				_				_					-										
			S1	ro 1300	,	040																	

REFERENCE				.:	MARSDEN	STATION TI	M8	ORIGINA	TOR'S		MAX.	WAVE	WEA	CLOUD		T	NODC
CTRY IO.	CODE	LATITU	DE LOI	AGITUOE POPUL	SOUARE	MO DAY H	YEAR		ATION IMBER	TO '	OF I	DBSERVATION	THER	CODES	i	S	TATION
311273	55	3635	N 04	915 W	113 69			E12 006		5048	16 0	<u>ı</u>	1 ×1	8 2			0006
					COLOR		SPEED MET	O- AIR TEM	WET COD	NO. OBS.	SPECIAL	.					
					CODE	TRANS. DIR.	FORCE (mb		าบเธ	DEPTHS	BSERVATION	(3)					
						35	509 23	4 222	197 7	14							
	MESSENGR TIME o	CAST NO.	CARD TYPE	DEPTH (m)	1 "C	5 */**	SIGMA-T	SPECIFIC VOLUM	₹ △ □ DYN. W X 10 <sup>3</sup>	VELOC SOUN		PO4=P	101AL-P	NO2-N ug - at/l	NO3-N pg - a1/1	51 O4-50	
								-									
		' '	STD	0000	1852	3641	2624	0017924	0000	1519	77	'	,				
	131		085	0000	1852	36406	2624			1515							
			STD	0010	1852	3640	2623	0017974	0018								
	131		STD	0020	1850	3640	2624	0017969	0036								
	131		OBS STD	0025 0030	1849 1847	36402 3640	2624	0017932	0054	1520							
	131		085	0049	1839	36406	2625 2627	0017932	0094	1520 1520							
	151		STD	0050	1839	3640	2626	0017823	0090								
	131		085	0074	1828	36395	2629	0011023	0070	1520							
			STD	0075	1824	3640	2630	0017562	0134	1520							
	131		085	0098	1752	36426	2650			1518							
			STD	0100	1750	3643	2650	0015721	0175	1518							
			STO	0125	1732	3641	2654	0015475	0214	1518	12						
	131		OBS	0148	1718	36401	2656			1518	32						
			STD	0150	1717	3640	2656	0015307	0253	1518	12						
	131		085	T0198	1694	36350	2658			1518							
			STD	0200	1693	3635	2658	0015285	0329								
			STO	0250	1651	3628	2663	0015000	0405								
			510	0300	1598	3619	2668	0014623	0479								
	131		STD OBS	0400 T0400	1457 1457	3597 35973	2683 2683	0013442	0620								
	131		STD	0500	1268	3569	2701	0011920	0746	1513 1508							
	131		085	0503	1262	35681	2701	0011920	0746	1508							
	131		SID	0600	1088	3545	2717	0010512	0858	1504							
	131		OBS	T0611	1069	35423	2718	0010312	0030	1503							
			STD	0700	0902	3528	2735	0008733	0955	1498							
			STO	0800	0757	3518	2750	0007328	1035	1494	7						
	131		OBS	0822	0731	35167	2753			1494	0						
			STD	0900	0680	3517	2760	0006369	1103								
			STD	1000	0618	3518	2770	0005535	1163	1492							
	131		OBS	T1043	0592	35188	2773			1492							
			SID	1100	0552	3514	2774	0005055	1216	1491							
			STD	1200	0493	3508	2777	0004802	1265	1490							
	121		SID	1300	0449	3503	2778	0004685	1313	1490							
	131		OBS STD	1313 1400	0444 0419	35023 3500	2778 2779	0004606	1359	1490 1490							
			STD	1500	0403	3498	2779	0004634	1405	1490							

REFERENCE	SHIP					THE CO.	MA	RSDEN	STA	TION	TIME					INATO			DEPTH	DEPTH	00		VE A TION	u e	W E 4		CODE			NODC
THY ID.	CODE	LATITU	- 1		GITUDE 1/		10*	JARE T.	но:	IGMI			YEAR	CRU		STAT			TO MOTTOB	OF S'AAPL'S			T PER		COD	e L	CODES			NOITAT2
	+	_	1/10		_		-	1.		DAY		$\neg$		+	_		O.L.	+				A G	PER			_		+		
311273	3 55	3645	N	049	917 1	N	113			04	135		968	E	2 00		no T		4801	15	12	,	[	1	X I	1	6 4	1	1	0007
								WA	_		WINE	ÉLO	BAR		DRY	EMP.		vis.	NO. 085.	SPEC										
								COLOR	TRAN	S. DIR		RCE	(mbi		BULB	BL		CODE	DEPTHS	OBSERV	A TION S	ļ								
									+	04	-		26	4	202	11	59	7	14			1								
							_		4		100	-		1		1.			-			+		1				1		1
	MESSENC	CAST	CAR		08911	-1 (m)		T 10		·/		SIGM	A - T	SPEC	OMALY-	LUME	OAN	A. D.	SOU VELO		02 ml/		PO 4-1		OTAL-		02-N	NO3-N		
	HR 1/3		117	·											-		X	103	*****			۱,	19 - 01,	-	pg - 017	1	- 01/1	yg - a1/	1 2 - at	"
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	,		S:	ַ סו	00	00	1	878	36	43	2	61	9	0.0	1839	99	00	00	152											
	13	5	083	5	0.0			878	-	427		261							152											
			S.		00			866		42		62	-		1819	-	00		152											
		_	-	D	00	_		855		41		62		00	180	39	00	36	152											
	13	5	08		00			849		404		262		0.0	1790	0.1	00	S /.	152 152											
				0	00			846		40		262 263			1739		00		151											
	13	6	083	rD	00			.822 .820		404		263	_	00	1113	, ,	00	70	151											
	13	2		T D	00	_		760		40		264	_	0.0	1604	42	01	21	151											
	13	5	085		00			758		401		264		0.0	100	7.	01		151											
			S		01			731		42		265		00	153	24	01	71	151											
	13	5	083		01			730		420		265				_			151	178										
			S	O	01		1	722	36	40	2	65	5	00	153	24	02	09	151	179										
			s'	ſΟ	01	50	1	709	36	38	2	265	7	0.0	152	39	0.2	47	151	179										
	13	5	083	5	01	52	1	708	36	382	2	265	7						151	179										
				0	02			672		31		266		00	150	95	03	23	151											
	13	5	08		02			670		307		266							151											
				D	02			628		20		266			150		03		151											
				0 1	03			576 452		88		266 267			147		04	_	151 151											
	13		083	D	104			441		866		267		00	140	12	06	1 /	151											
	13	7	5		05			301	_	68		269		0.0	126	46	07	50	151											
	13	6	08:		05			288	-	661		269		0.0	120	•0	0 1	20	150											
	13	-		Το	06			067		37		271		00	107	16	0.8	67	150											
	13	5	08:		T06			041		337		71							150											
		-		ĪD	07			853		17		73		00	087	36	09	64	149											
			5	T D	08	00	(	693	35	05	2	274	9	00	073	17	10	45	149											
	13	5	08:	5	08		(	678		044		75							149											
				TD	09			611		05		275			063		11		149											
		_		D	10			1554		05		276		0.0	056	39	11	73	148											
	13	5	08		T10			545	-	047		276							148											
			_	TD	11			535		06		277			053		12		149	-										
	1.7			TD	12			517		08		277		00	051	01	12	<b>5</b> 0	149	_										
	13	כ	08	5 To	12 13			)500 )491		098 09		277 277		0.0	048	1.6	13	20	149											
				TO	13			459		06		211 277			048		13		149											
				TO	15			421	-	01		277			046		14		149											
		5	08:	-		20		412		995		277		-	, , , , ,		7 -4			926										

	SHIP	LATITU	D€	LON	4GITUDE	불성	MARS UD2	DEN	STAT	ION I	*ME	YEAR	CRUI	SE		MOITA	-[.	DEPTH TO	MAX. DEPTH		WAVE SERVATIO	ons	WEA- THEF	CFORD			NODE
10.	300	•	1/10		1/10	~ <u>z</u>  -	10*	1.	MO	YAC	4R.1/10		NO			MBER		BOTTOM	S'MPL	S DIP	HGT PER	SEA	CODE	TYPE AM	1		NUMBER
73	5.5	3609	N	04	749 W	,	113	67	06	6	177	1968	E1	2 0	0 8		c	303	16	18		2	X1	2 5			0008
. 15	3)	300,	14	04	172 77	1	ĺ	WA			WIND				TEMP	· *C	1	NO.	r <sup>1</sup>		' '	-	1 ~ 2	1 2 13	1	1	0000
									TRANS		SPEE	BAR MET		DRY	-	WET	VIS.	OBS.		CIAL							
							Į	CODE	Iml	DIR.	FOR			BULB		BULB		DEPTHS	OBSERV	AHONS							
							1			19	514	17	3	219	)	187	7	14									
		1				т			-		1		1			T-					_						_
M	ESSENGR TIME	CAST NO.	CAF		DEPTH In	n)	Ţ	°C	5	٠/	SIG	T-AM	SPECI	FIC VO	-X107	, DA	Ą Ņ.		DCITY	02 mt/	PO4		107AL-P ug = 01/I	NO2-N ug - ai/l	NO3-N	\$1.04= 10 - 01.	
н	R 1/10	1				_							<u> </u>			X	103						pg - 0171	99-001	µg - at/l	) y - 01.	-
																									1		
,				ſρ	0000			997	364			18	CO	184	84	0.0	00		210								
	177	,	08		0000			897		•79		18			_				210								
				TO	0010			990	36	-		19		183		0.0			210								
				סז	0020		_	979	36			22	00	181	33	00	37		208								
	177	'	08		0024			973		76		24	00						207								
				70	0030			955	36			28		175		00			203								
				TD	0050			816	36			39	00	166	200	UU	89		196								
	177	•	08		0050			816	36	87		39	00	166	0.2	0.1	30		196 199								
	177		0B:	מז	0078			813 811		19 185		40	00	100	000	01	30		199								
	177			TD.	0100			788	36			46	nn	161	63	0.1	71		196								
	177	,	08:		0105			784		88	_	47	00	101	0 )	0 1			195								
	1,,,			סז	0125			777	36			49	٥٥	159	76	0.2	12		197								
				70	0150			769	36			51	-	158		02			198								
	177	7	08:	_	0160			766		90		51	•			٠.			199								
				To	0200			758	36			53	00	157	779	03	31		203								
	177	7	08		0209		_		36	91																	
			5	Tρ	0250	)	1	749	36	+7	26	54	00	158	168	04	10	15	209								
			S	ΤĐ	0300	)	1	739	36	45	26	55	00	159	86	04	89	15	214								
	177	7	08:	s	10399	>	1	720	36	399	26	56						15	224								
			S	TD	0400	)	1	719	36	0	26	56	00	162	11	06	50	15	224								
	177	7	08:	s	0499	•	16	618	36	198	26	64						15	207								
			5	TΟ	0500		10	616	36		26	64	00	156	59	0.8	10		207								
				TD	0600			424	35	-	_	81	00	142	16	0.9	59		159								
	177	7	08		T0606			414		328		81							156								
				TD	0700			282	35			95		130			95		126								
				TD	0800			147	35			110	00	117	15	12	19		094								
	177	,	08	_	0820			120		78	_	113	00	000			27		088								
				TD	0900 1000			007 8 <b>8</b> 4	35 35			729 745		098 083			27		060 031								
	1 77	,		TD	11034			846		31 352		750	00	V 0 3	101	14	18		022								
	177	,	08	S TD	11034			787	35			157	nΛ	072	10	1.4	96		010								
			_	טי מז	1200			705	35			165		064		-	64		994								
			_	TD	1300			633	35	_	_	772		057	-	_	25		982								
	177	,	08		1342			605		217		774	•0	1			- /		978								
	• • •	,		TD	1400			570	35		_	776	00	053	128	16	81		973								
				Τp	1500			516	35			778		051	_	_	33		967								
	177	,	08		T1650			454	-	041		778				• '			966								

	ODE	LATITU	DE 1/10	LON	GITUDE 1/10	CAUFT	MARS SQU			TION TI (GMT)		YEAR	CRUISI NO.		ATOR'S TATION TUMBER		DEPTH TO BOTTOM	MAX, DEPTH OF S'MPL"	OBS	WAVE ERVAT	10 N S	THI CO	EP I	CODES	5		NODC STATION NUMBE	N
73	55	3628	N	04	845 W		113	68	06	08 1	29	1968	E12	009	9	9	5029	14	01		2	X:	ιl	7 6	1		000	9
	·						[	W	TER	W	IND	BAR	0-	AIR TEA	AP. °C	VIS	NO.	SPF	CIAL									
							1		TRANS	DIR.	SPEED	741 6 1		DRY BULB	WEI	SEODE	OBS. DEPTHS		ATIONS									
								CODE			FORC	` -				,	3.4	-										
_							]		1	32	508	16	9 2	46	203	6	14	L	_	_						_		_
	ESSENGE	CAST	CA		DEPTH	(m)	,	*⊂	١,	•4.	SIG	MA-T	SPECIF	c volu	ME ₹	Δ D.		DND	0 2 ml/l			TOTAL		0 <sub>2</sub> -N	NO3-N			н
	R 1/10		1 1	PE									ANON	MALY-EI		(103	VELO	OCITY		10.	61/1	78 - 01	/3 P.	2 - 01/1	μg - at/l	h8 - 0	21	
'		1	s '	' סד	000	٥	19	925	36	44	26	0.8	001	9439	9 01	000	157	218										
	129	9	ов	S	000	0	19	925	36	442	26							218										
				10	001			921	36		26			937		19		210										
				1 D	002			918	36		26	_	001	9312	5 01	39		219										
	129	9	08		002			916		444	26		001	8741		058		219 214										
				TO	003		_	893 836	36 36		26 26			7411	-	094		201										
	129	3	0B	TD	005			836		448	26	-	001	741.	<i>y</i> 0'	J 7 m		201										
	123	,		J D	007			814	36		26	_	001	6979	5 0	137		199										
	129	5	08		007	_		811		448		37			, ,			198										
	12.	•		TD.	010			779	36		26		001	614	7 0	178		193										
	129	9	OB		010			773		468	26			-			15	192										
				Īρ	012			765	36	47	26	50	001	585	3 0	218	15	193										
			S	10	015	0	1	757	36	47	26	52	001	575	8 0	258		195										
	129	9	ОВ		016			755		466		52						196										
				10	020			755		47	26		00 1	5861	в о	337		202										
	129	9	ОВ	_	1021	_	-	754		469		53						204										
				1 D	025		-	745		45		53		593		416		207										
				1D 1D	030			722 633	-	40		55 64		15926 15366		496 653		208 196										
	129	0	0B	_	040 T042			5 <b>9</b> 7	36	172		67	001	יסככי	0 0	093		189										
	12:	,		TD.	050		_	478		96		78	001	427	9 0	801		161										
	129	9	08		053			432		887		82		· • • •	. 0	1		150										
		-	_	ΤD	060			352	-	80		92	001	307	8 0	938		134										
	129	9	ов	_	1062		_	313		750		96					_	125										
				Tp	070			162	35	53	27	09	001	1154	2 1	061	15	083										
			S	TD	080	0	0	981	35	31		25	001	006	5 1	169		032										
	129	9	QВ	5	083			929		260		29						018										
				TO	090			835		23		42		837	_	261		994										
				1 D	100			714		18		56	000	699	4 1	338	_	963										
	129	9	08		T103			678		165		60	000					955										
				TD	110			613		14		67		592	_	402		940										
		_	_	TD	120			536		10		73	000	524	0 I	458		925 923										
	129	7	OB	S ID	122 130			519 486		091		75	001	0489	2 1	509		923 921										
				TD	140			463		04	_	77		0490		558		928										

RENCE	SHIP	LATITU	DE	LON	GITUDE	DCTR	MAR		STA	TION T	IME	YEAR			NATOR'S		OEPTI	H OE	AX. PTH	OB	W.A SERV	VE A TION	s	WEA-	CLOU			.1	ODC
10. NO.	COOF		1/10	100	1/10	Z Z	10*	1 1-		OAY F		· crik	CRU		NUMBE		80110	البد	DF FPL'S	DIR		PER		CODE	TYPE A				UMBER
1273	55	3625	N	04	840 W		113	68				1968	E	12 01	n		4480	n 1	6	30			1	X1	1				010
<b>JEC 1</b> 2	1 32 1	3023	,,	1 0 -	0-0 1	1 1		WA			VIND				MP. °C	-	TNO	1			1	1 (	• (	^ 1	1 1 1.	' '		1 4	, O I O
								COLOR	TRAN!	S. OIR.	SPEEC		TER	ORY BULB	WET		000	0.00	SPEC ERVA	TIONS									
										03	507		_	241	179	-	14												
1	MESSENG	RICAST	CA	en l					1		1		SPEC	CIFIC VOL	IIME	≨ ∆ o	,	OUND			Τ.	PO4-P	1,0	) TA L - P	NO2-	NO <sub>3</sub>	_ы [	SI O4-Si	
	TIME HR 1/10	S NO.	TY		OEPTH	m)		*c	,	•/	SIG	MA-T		OMALY-		X 10 <sup>3</sup>	A	LOCIT	Y '	0 2 ml/		g = 01/		g = a1/l	μg - al.			μg - αl/l	рН
			_		200		,	000	1		1				,		١,,		.							1			
	12	a	- 5 - 0B	TD	0000			922 922	36	47 473	26 26		UU	1914		000		5217											
	12	0		3 17 D	9033			922 921	36		26		0.0	1914		0019		5217 5218											
				TD	0026			919	36		26			1914		038		5220											
	12	A	0B		0020			918		472	26		O()	1714	4 (	10 3 6		5220											
	12	Ů.		TD	0030		-	900	36		26		00	1873	1 (	057		5216											
				TD	005			835	36		26			1722		093		5201											
	12	8	OB		005			831	_	465	26		00		, ,	, 0 , 5		5200											
				TD	007		_	818	36		26		0.0	1691	а (	136		5200											
	12	8	ОВ		007			815		470	26		•			, , , ,		5200											
		_		TD	0100			781	36		26		0.0	1604	9 (	177		5194											
	12	8	ов		010			777		486	26							3193											
				TD	012			771	36			50	0.0	1585	6 (	217		5195											
			_	TD	0150		_	765	36		26			1580	-	257		5197											
	12	8	OB		015			764		485	26		-					5198											
			-	TD	0200			761	36		26		0.0	1591	5 (	336		5204											
	12	8	ОВ	-	T021		_	759		480	26							5205											
				ĪD	0250		1	748	36	46	26		00	1593	1 (	415		5208											
			s	ΤD	0300	)	1	724	36	42	26	56	00	1582	8 (	495		5209											
			S	ŤD	0400	)	1	643	36	27	26	64	0.0	1537	6 (	651	15	199	•										
	12	8	OB	S	1041	9	1	623	36	230	26	66					15	5196	,										
			S	TΩ	050	0	1	517	36	02	26	74	0.0	1468	9 (	801	15	5174											
	12	8	08	S	052	3	1	476	35	949	26	77					15	5165	•										
			S	ŤD	0600	)	1	354	35	78	26	90	0.0	1326	4 (	941	1 :	5135	•										
	12	8	08	S	T063	7	1.	296	35	709	26	97					15	121											
			S	ŤD	0700	)	1.	206	35	59	27	05	0.0	1195	0 1	067	15	5099	)										
				TD	080		1	076	35	44	27		0.0	1082	3 1	181	15	068	5										
	12	8	80		085			010		389	27							5053											
				TD	0900			972	35		27			095€		283		5047											
				ŤD	1000			879	35	-	27		00	0823	5 1	372		5029											
	12	8	08		1107			803	35	368	27	58					15	5012											
				ĬD	1100			757																					
				TD	1200			609																					
		_	_	TO	1300			501																					
	12	8	08		134			463	35	16P	27	87P																	
				TD	140			456																					
				TO	150			441																					
	12	8	08	S	T1634	4	0	422	34	99P	27	78P																	

REFERENCE CTRY ID.	SHIP	LATITU	DE		R ZON	SDEN	STATI	DN TH	ME	YEAR	CRUISE		ATOR'S	4	DEPTH	DEPT		W SER	A VE VA TIC	2110	WEA	C	OUD.			NODE	NC
ODE NO.			1/10	1/10	10*	1.	WO D	AY H	2,1710		NO,	'	NUMBE	R	ROTTOM	S'MPL	"S DIR	H (	GT PER	SEA	COD	149	AMI			NUMB	ER
31127	3 55	3507	N	04802 W	113	_		0 1	60	1968	E12	01	1		4114	15	25	5_		2	×1	7	2	ĺ		001	. 1
						W.A.		W	IN D SPEED	SAR	D+ }		MP. °C	_ vis	ND. 085.		ECIAL										
						COLOR	TRANS.	OIR.	OR FORCE	M ET (mb		DRY ULB	WET		DEPTHS	OBSER	VATION	15									
								24	512	18	3 2	30	210	7	14			$\dashv$									
							1			1	1			₹ Δ D	1			-				1					_
	MESSEN	NO.	CAS		1	*0	5	·/••	SIG	7 – A A	SPECIFIC ANOM	ALY-XI		DYN. M X 103		DOITY	02 m	18/1	PO4-		10TAL-1 1/10 - gu		2~N . a1/I	NO3-N ug - o1/l	\$1 D4- pg - at		рН
	HR 1/	10		-	-		+		1				+	A 10	+					-		-	-			+	
		ı	   51	0000	1	982	363	A	258	8.8	002	1 2 7	, I	000	152	222				1		i	- 1	1		,	
	16	0	085			982	363		258		002	12,	•	, • • •		233											
			SI		_	978	363		25		002	121	9 (	021													
			S:		1	961	363		25		002			042		230											
	16	0	083	0021	1	958	363	82	25	94					153	229											
			S1		1	923	363	7	261	3	002	002	0 (	063	153	221											
	16	0	083			857	363		26							205											
			S			823	363		26		001	779	1 (	101		196											
	16	0	083			750	363		264							177											
			S		_	749	363		264		001	601	2 (	143		179											
	16	0	0B3		_	744 738	363 363		269		001	540		182		180											
			S		_	722	363		269		001			221		179											
	16	.0	083			718	363		26	_	001	222	0 (	/221		179											
	10	, 0	51		_	707	363		26	-	001	543	9 (	260		-											
	16	0	085		_	689	363		26			,,,	,			177											
	•		S'			662	362		26		001	515	8 (	337		172											
			s.		1	604	361	7	260		001	474	3 (	411	15	162											
			s'	D 0300	1	540	360	6	26	72	001	429	0 (	484	15	149											
	16	0	083	T0360	1	457	359	23	26	30					15	131											
			S1			387	358		26		001	323	9 (	622													
	16	,0	083			307	356		269							94											
			S1		_	279	356		269		001	235	5 (	750		92											
	16	0	085		_	218	356	-	270				_			080											
			S]	-	_	094	354		27	_	001			865		342											
	1.0	. 0	S.			869 773	351	-	27		000	A09.	7 (	964	_	973											
	16	• •	083 S1			765	350 351		27		000	767	, ,	048		946 949											
			5			731	352		27		000			1118		955											
	16	.0	083			700	353		27		000	090		0		954											
	•		S			668	352		27		000	578	5 .	179		946											
			5			584	351		27		000			237		928											
			s:			518	350	_	27		000	_		293		916											
	16	0	083			502	350	04	27							915											
			s'		0	470	350	1	27		000	515	0 :	1347	149	913											
			s'	0 1400	0	439	350	1	27	77	000	483	6	397	149	917											
							350		27																		

REFERENC	E						-	MAR	Mana	e :	TATION	Ties	. T		T	ORIGI	NATO	5,2		DEST	MAX.		WA	VF		WEA-	To	LOUO			
TRY IO	SH		LATITUS	DE	LON	GITUOE	DRIFT	sau sau	ARE	١,	IGM	T)		YEAR	CRU		STATI		-	DEPTH	DEPTH	O8	SERV	MOITA	S	THER	Č	OOES		5	NODC TATION
ODE NO		100	•	1/10		1/10	) P Z	10*	1.	MO	DAY	HR.1	/10		N		NUM			MOTTOM	S'MPL"	DIR	HGI	PER	SEA	CODE	TYP	PE AMT		l N	UMBER
3112	73 5	5	3629	N	041	850 W		113	68	0.6	11	12	9 1	968	Fi	2 01	2			4892	18	09			2	Х6	5	8			0012
	. ,, ,	-	,,,,	,	•		,	1		TER	1	WIN		BAR	<u> </u>	AIR T		c		NO.	r'		1	' '	_	,				,	••••
									COLOR	TRA	NS. DI		PEFD	MET		ORY	w		VIS.	085.		CIAL ATIONS									
									COOE	I P	*1	, ,	OPCE	(mb:	$\rightarrow$	BULB	BU	L8		DEPTHS											
											04	4 S	20	17	9	168	16	55	5	14											
	MES	SENGR	CAST	CAI				T		T						IFIC VOL	11166	¥ /	20	T 601	UNO		Τ.	0	1,				NO3-N	\$104-\$1	T
	T	IME OF	NO.	TYE		DEPTH	(m )	1	C		s */		SIGM	I-A		OMALY-		OYN	103 1. W.	VELO	DCITY	02 ml/		04-P g = 01/I		OTA L-P /g - a1/l		- ot/1	µg - al/l	yg - ai/l	рН
	HR	1/10	-					-				-			⊢		-		10	+	-		+		+-		-	$\rightarrow$			├
		- 1	١	٠.	TD	000	^		897	١,	643		261	,	١ ۵٥	1882	ا ،	00	^^	1,5	i		1				l	- 1			I
		129		08:		000		-	897		6432		261		00	1002	: >	00	UU		210 210										
		12,			T D	001			896		644		261		0.0	1882	5	00	10	15											
					TD	002		_	896		644		261			1882		00		152											
				_	TD	003			895		644		261			1882		00		15											
		129		OB:		003			895		6440		261			,				15											
					TD	005			838		642		262		00	1766	4	00	93	15											
		129		08	S	006		1	813	3	641		263						-	15											
				S.	T D	007	5	1	794	3	642		263	19	00	1670	4	01	36	15	192										
		129		083	S	009	1	1	777	3	6433	3	264	4						151	190										
				5	TD	010	0	1	771	3	644		264	6	00	1610	4	01	77	15	190										
		129		OB:		012		_	760		646		265							151											
					TD	012		_	760	_	647		265	-		1572		02	-	15											
					TD	015		_	760	_	647		265		οc	1577	4	02	56	15											
		129		OB:		018		_	759	_	6478		265							15											
					TD	020			750		645		265		υÜ	1588	3.1	03	35	157											
		129		08	S TD	T024			727		6399		265		~	1585	-	04		157											
					TD	030			723 695		639 633		265 265			1580		04		152	200 199										
					TD	040			615		619		266			1532		06			190										
		129		OB:		T047			527		6044		267		0.0	, 1 ) ) 2		00	٠,	15											
		,			TD	050			499		600		267		00	1444	3	07	98	15											
					ŤD	060			352		577		269			1329	-	09		15											
		129		OB:		060			342		5760		269				-	- 1			132										
				S	TD	070	0	1	171	3	552		270	7	00	1178	16	10	62	150	086										
		129		OB:	S	1073	4	1	114	3	5451		271							150	071										
					TD	080			8 00		539		272			0999		11		150											
					ΤD	090			870		531		274		00	0836	8	12	63	150											
		129		OB:		097			782		5261		275								987										
					TD	100			763		526		275			0717		13		145											
					TD	110			686		524		276			0628		14		_	970										
		1 20			T D	120			619		521		277		UC	0563	9	14	0 /		960										
		129		OB:		1121			608		5204		277		00	06 27	1.4	16	22		958										
				_	TD TD	130 140			560 510		516 511		277 277			)0527 )0504		15 15		149	952										
					TD.	150			470		507		277			0488		16		149											
		129		0B		150			468	_	5064		277		~		, ,	10		149											
		,			TD.	175		_	407		498		277		on	0491	4	17	46	149											
		129		OB:		1178			403		4974		277		00	J 4 7 1		.,	70	149											

															_					.,-			-					
REFERENCE	SHIP	LATITE	JOE	LONG	ITUDE	E SC	MAR 5QU	SDEN	STATIC	M TI	ME	YEAR	0.011	ORIGIN			_	DEPTH	DEPTH		WA \	TIONS	W E		CLOUG			NODC
CODE NO.	CODE		1/10			NO NO	10*		MO TO		R.1/10		CRU		NU M		1	MOTTOM	S'M PL			PEN SE		20	TYPE AM1			NUMBER
31127	3 55	3636	5 N	048	45 W		113	68	06 1	2 1	25	1968	EI	2 01	3		5	258	52	0.8		2	x	1	8 5			0013
								WAT		W	IND	BAP		AIR TE		- 4	/15. T	NO.	SPI	ECIAL	7							
								COLOR	TRANS.	DIP	OF FORCE	AA ET		DRY	BU	T CO	ODE	OBS. DEPTHS	OBSER	VATION	5							
										04	509	28	+	164	12	-+	,	21			1							
	MESSEN		T	_				-				1			<del>'</del>						1			T				
	TIME	O' NO.	CA	PE	DEPTH (	m)	т	*C	5 .	·	SIG	Y-AM	SPEC	DMALT-E	02	₹ ∆ 0∀N. 1 1	M S	VELO		O 2 ml		4-P	101AL.		NO2=N ug - ol/1	NO3-N µg - o1/l	\$1 O4-1	
	HR 1/1	0	1								-				-			+			-			+			-	+
		i	5	ro	0000	)	1	919	364	5	260	0.9	0.0	1926	2	000	0	152	16					ı				
	12	5	08:		0000			919	364		26				_			152										
			S	TD	0010	)		916	364	5	26	10		1923		001	9	152	17									
		_	S		0020			914	364		26		00	1921	4	003	8	152										
	12	5	08		002			912	364	-	26		0.0	1007	,	206		152										
			S	TD.	0030			900 839	364		26 26			1887 1732		005		152										
	12	5	08:		005			833	364		26		00	11732	7	009	-	152										
	• • •			Īρ	007			823	364		26		0.0	1699	4	013	7	152										
	12	5	08		0080			818	364	76	26	37						152										
				T D	0100	)	1	780	364	7	26	46	0.0	1609	8	017	8	151	93									
	1 2	15	08:		010			772	364		26				_			151										
				TD.	0125			767	364		269			1588		021		151										
	12		OB:	Īρ	0150			762 761	364		26°		00	1581	U	025	В	151										
	1.2	,	5		0200		-	761	364		26		0.0	1593	6	033	7	152	-									
	12	5	08:		T0214			759	364		26		0.0			0,0	•	152										
				Īρ	0250			745	364		26		0.0	1600	6	041	7	152										
			S	T D	0300	)	1	717	3631	3	265	55	0.0	1595	5	049	7	152	206									
				ΤD	0400		_	631	362		26		0.0	1553	7	065	4	151										
	12	5	08:		T0423			605	361		26				_			151										
	1.7		S 08:		0500			496 450	3590		26 26		00	1452	2	080	14	151										
	12	,		r D	0535		_	374	358		26		00	1338	7	094		151										
	12	5	08:		T0643			318	357		26		00	1336	'	0 7 4	-	151										
		-	S		0700			215	356	-	27		00	1205	2	107	1	151										
			S	TD	080	)		052	353	•	27	16		1074		118		150										
	12	5	OB:	5	0861			964	353	00	27	27						150	36									
				τo	0900			915	352		27			0927		128		150										
		_	S	_	1000			798	352		27		00	0766	1	137	0	149										
	12	5	08:	5 TD	T1081 1100			713 704	3524 3524		270		0.0	0655	0	144	,	149										
				ĪĎ	1200			659	352		27			0631		150		149										
				ĪD	1300			617	351		27			0604		156		149										
	12	5	*S		1353			507	350		27			0535		159		149										
				ΤD	1400			578	351		27		00	0588	4	162	4	149	76									
			S		1500			542	351		27			0569		168		149										
	12	5	*S		162			415	349		27			0496		174		149										
			S'		1750 2000			464 405	3504		27			0528		181		149 150										
	15	1	08:		721 <b>7</b> 9		-	374	349		27		00	0003	U	174	· I	150	-									
	• -	-	S		2500			352	349		27		00	0481	7	218	8	150										
	15	1	08		2727			336	349		27		- •	•			,	150										
			S	ro	3000	)	0	316	349	5	27	85	00	0476	6	242	7	151										
	15		083		T 3286			294	349		27							151										
	15	_	083		T 3825			247	349		27				_		_	152										
	15		*S	_	4378			232	3489		27			0452		306		152										
	15		*S		5029 5179			228 235	348		27			0473 0491		336		152										
	1.7	' A	- 3	עו	21/2		U	<b>4</b> 2 2	340	, <del>-</del>	211	00	00	シサフト		343	, 7	172										

REFERENCE	SHIP						MARS		STATIO	N TIMI		YEAR			A TOR'S		DEPTH	MAX. DEPTH	Das	WAVE ERVATION	N.S.	WEA-	CLOUD			ODDE
ODE NO.	CODE	LATIT	1/10		NGITUDE 1773	Delift	10,	I.		V HR,1		YE A R	CRUISE NO.		TATION		BOTTOM	OF S'MPL"	1		584	CODE	TYPE AM	+	N	UMBE
-		+		-		-+	1					0.4.0		_		- 1		15	18		1	×1	8 2		1	001
311273	55	364	3 N	0.4	4907 W		113	69 WA		18 WIN	_	968		LIR TE			4846	15	1.0		1	1 ^ 1	0 2	ı	1	,,,,,,
											SPEED	BARD METE		DRY	WET	COD	NO. DBS.	SPE	CIAL ATIONS							
								CODE	im)	OIR.	ORCE	(mbs		ULB	BULS	000	DEPTHS	OOJEKY	~ 110117							
									1	7 5	10	318	1	97	134	. 7	14									
Γ	MESSER	YGR C	1	ARD			1		1			1	SPECIFIC	VOLU	ME	<b>≅</b> △ □	SDI	JND		PO4-1	P	TOTAL-P	NO2-N	ND1-N	5104-5	
ľ	MIS	E P NO.	T	YPE	DEPTH	(m)	T	°C	5 -		SIGM	A-T		ALT-RI		X 10 <sup>3</sup>		CITY	D2 ml/l	µg - 01.		μg + of/I	ug - 01/1	µg = ot/1	μg - 61/I	P
-	HR 1/	10	+				+		+								_							-		
		- 1	Ι,	570	000	0.0	1	980	3643	1	259	2 1	002	090	7 0	000	152	233		1	)				1	1
	1	89	O		000			980	3642		259						152									
	-	•		STD	001			969	3642		259	5	002	071	2 (	021	152	231								
				STD	002	0	1	949	3642	2	259	9	002	028	5 (	041	157	227								
	1	89		3.5	002	5	1	936	3641	4	260	3					152	224								
			:	STD	003	0	1	911	3642	?	260	9	001	938	5 (	061	152	218								
			:	STD	005	0	1	837	3643	3	262	9	001	757	5 (	098										
	1	89	01	35	205			834	3643		263						157									
				STD	00			806	3644		263		001	685	8 (	141										
	- 1	89		35	00			804	3643		263							196								
	_			STD	010			758	3644		264		001	581	4 (	182										
	1	89	_	35	010			757	3643		265		001	c 7/				186								
				STD	012		_	753 748	3644 3644		265 265		001			)221 )261		189 192								
	,	89		STD BS	01		_	748	3644		265		001	214	. (	/201		192								
	1	9	-	s T D	020			735	364		265		001	582	1 (	340		196								
	1	89		35	T020			734	3640		265			J 0 2	• `	,,,,,		196								
	•	0,7		STD	025			713	3636		265		001	569	5 (	419		197								
				STD	030			680	3633		266		001			1496		195								
				STD	040			582	3616		267		001			648		179								
	1	89		BS	T040			580	361		267						15	179								
	-			STD	050			441	3589	9	268	0	001	402	7 (	792	15	148								
	1	89		BS	050		1	438	3588	30	268	0					15	147								
				STD	060	00	1	321	357	3	269		001	295	4 (	927		123								
	1	89		BS	T060			316	3572		269							122								
				STD	070			143	3550		271		001			1049		076								
				STD	080			983	353		272		000	995	4	1155		033								
	1	89	-	8.5	080			973	353		272				_			031								
				STO	090			839	3526		274		000	-		246		996								
	_			STD	100			728	3520		275		000	103	2	1322		969								
	1	89		85	T100			725	3520		275		000	61.7	,	1200		968								
				STD	110			682 633	352 352		276		000	587		1390 1452		968 965								
		00		STD BS	120			601	352		277		500	100		. 7	_	963								
	1	89		BS STD	130			582	351		277		000	527	5	1508		961								
				STD	140			528	351		277		000			1560		955								
				STD	150			470	350		277			510		1612		947								
		89		85	T 15			453	350		277							945								

REFERENCE	SHIP	LATITUDI	101	NGITUDE	DRIFT	MARSDEN SQUARE	STATION T	M.E	YEAP		RIGINA		- 1	DEPTH TO	MAY. DEPTH	OBS	WAVE	s	WEA-	CLOUD			NODC NOTAT
CODE NO.	CODE		/10	1/10	2 5		MO DAY	R,1/10		CRUISE NO.		REEMI	80	277044	OF 5"34 PL*S	DIA	HGT PER		CODE	TYPE AM			40 WBER
311273	3 55	3504		801 W		113 58	06 14 1	85	1968				4	206	41	20		1	X1	8 2			0015
						COLOR	TRANS DID	SPEED	BAR	ER D		WET CO	DE	NO, OBS. IEPTHS	SPEC	IAL TIONS							
						CODE	16	508	30			173 7	-	21									
	MESSENGP				•		1.0	1						<del></del>			T	1.					
	TIME O	CAST NO.	CARD	OEPTH	(m)	1 %	s ·4.	SIG	MA-T	SPECIFIC	LY-X107	E SA DYN. X 1	š.	VELOG	C114	0 g m1/1	PO4-P yg - 61/		07A L P ig - 01/1	NO2=N ug = al, l	ND3=N µg - a1/I	\$1 Q4-5 ug - at/	
			STD	0000	D	2020	3635	25	75	0022	502	000	0	152	43								
	185	i	085	0000		2020	36347	25	75					152	43								
			STD	001		2000	3635	25		0022		002		152									
			STD	002		1971	3635	25		0021	320	004	4	152									
	185	,	0BS	002		1952	36353 3635	25°		0020	047	006	_	152 152									
			STD	005		1920 1821	3636	26		0017		010		151									
	185		085	005		1821	36356	26		0017	122	010	2	151									
	100	,	STD	007		1761	3633	26		0016	582	014	5	151									
	185		085	007		1761	36330	26		0010	,,,,	0.4	_	151									
	185		085	009		1732	36330	26						151									
	• • • •		STD	010		1731	3633	26		0015	970	018	6	151	77								
			STD	012	5	1706	3632	26	53	0015	550	022	5	151	74								
	185	i	085	014		1683	36297	26						151	-								
			STD	015		1682	3630	26		0015	259	026	4	151									
	185	i	085	019		1642	36233	26					_	151									
			STD	020		1640	3623	26		0014		033		151									
			STD	025		1564	3609	26		0014		041		151									
	185	:	STD OBS	030 T039		1496 1382	3598 35810	26 26		0013	723	048	•	151 151									
	100	,	STO	040		1381	3581	26		0013	1043	061	0	151									
	185		OBS	049		1294	35721	26		001		1101	,	150									
	,		STD	050		1293	3572	26		0012	196	074	5	150									
			STD	060		1152	3551	27		0011		086		150									
	185	,	085	T060		1152	35513	27						150	63								
			STD	070	0	0952	3533	27	31	0009	210	096	4	150	06								
			STD	080		0800	3522	27		0007	706	104	9	149	64								
	185	<b>.</b>	085	080		0799	35219	27						149									
			STD	090		0714	3521	27		0006	615	112	0	149									
	185	<b>i</b>	085	1099		0640	35189	27		000			_	149									
			STO	100		0639	3519	27		0009				149	-								
			STD	110 120		0577	3515	27		0009		123		149									
	185		STD OBS	125		0524 0500	3511 35084	27 27		000	υ <b>5</b> υ	129	0	149									
	102	,	STD	130		0485	3507	27		0004	878	134	0	149									
			STD	140		0456	3503	27		0004		138		149									
			STD	150		0431	3501	27		0004		143		149	_								
	185	5	085	7151		0429	35007	27						149									
			510	175		0401	3500	27		0004	686	155	5	149									
	209	,	овѕ	T195		0379	34990	27						149									
			STD	200		0375	3499		83	0004	612	167	1	149	92								
		•	OBS	245		0334	34968	27						150									
	209	•			^	0329	3496	27	85	0004	552	190	1	150									
	209		STD	250	U	0329																	
	209 209		085	T293	8	0289	34936		87					151									
	209	9	085 S <b>T</b> D	T293 300	<b>8</b> 0		34936 3493	2 <b>7</b> 27		0004	375	212	4	151									
	209 209	; ;	085 STD 085	T293 300 343	8 0 5	02 <b>89</b> 02 <b>81</b>	34936 3493 34916	27	87	0004	375	212	4	151	23								
	209 209 209	? ?	085 STD 085 085	T293 300 343 393	8 0 5 2	0289 0281 0225	34936 3493 34916 34895	27 27	87 89	0004	375	212	4	151 152	23 61								
	209 209	? ?	085 STD 085 085 085	T293 300 343 393 T397	8 0 5 2 9	0289 0281 0225 0225	34936 3493 34916 34895 34894	27 27 27	87 89 89					151 152 152	23 61 69								
	209 209 209	; ; ;	085 STD 085 085	T293 300 343 393	8 0 5 2 9	0289 0281 0225	34936 3493 34916 34895	27 27 27 27	87 89 89	0004				151 152	23 61 69 73								

RY 10.	SHIP	LATITE		LON	IGITUDE	NDCTR	MARS	ARE	-{	ON TI		YEAR			STATIO	N	DEF		MAX. OEPTH OF		BSERV	A TION		WEA- THER CODE	CLOUG		9	NOOC TATION
-	+	-	1/10		1710	-	10*	1			R,1/10			_	NU M8	×	-	-	S'MPL"		HG	TPER			TYPE A A			
31127	3 55	3503	3 N	048	803 W	1	113	58 0	_			1968	Ε				416	60	15	06	_	1	1	ΧI	8 3	1		0016
								WATE	R	V	DNIV	BARC		AIR TE		VIS	NO		SPE	CIAL								
								COLOR 1	RANS.	DIR.	SPEED	METE		ORY BULB	W.E.	COS	DEP		OBSERV	ATIONS								
							-	-		00	500	299	_	213	-	7 7	14	-			-							
										00	300	27	_	213	10	, ,	11.	• 1			1,		_			T		_
,	MESSEN	CAST NO.	CA		DEPTH (m	, 1	T	*c	5	٠/	SIG	4A-1		CIFIC VOLU		≨ ∆ C	и.	sou		0 2 ml/		PO 4-P		OTA L-P	NO2-N	NO3-N	5104-5	
	HR 1/1		TY	PE									_			x 10 <sup>3</sup>		VELO	CIII		,	ug - 01/		μ <b>g -</b> 01/1	µg - a1	µg - σ1/1	yg - 01∕	1
												i									-							
	,			TD	0000			985	363		25		0	02154	6	0000		152										
	12	8	08		0000			985	363		25		_					152										
				TD	0010			985	363		25			02159		0022		152										
				TO	0020		_	967	363	-	25		0	02119	8	0043		152										
	12	8	08	S ID	0025			951 912	363 363		25 26		^	01988	^	0064		152 152										
				TD	0050			712 797	363		26			01700		0101		152 151										
	12	Q	08		0051			793	363	-	26	-	0	01110	•	0101		151	-									
	12	. 0		TD	0075			752	363		26		٥	01622	7	0142		151										
	12	B	08		0076			751	363		26			01022	•	0172		151										
	12	U		ΤD	0100			733	363		26		0	01580	5	0182		15 i										
	12	8	08		0102			732	363		26				-		_	151										
		_		ĪD	0125			717	363		26		0	01558	6	0222		151										
				TD	0150		10	598	363	13	26	56	0	01537	8	0260	)	151	76									
	12	8	08	S	0153		10	596	363	22	26	56						151	75									
				TD	0200		10	551	362	6	26	51	0	01498	2	0336	5 :	151	69									
	12	8	08	S	10208		1	643	362	48	26	62						151	68									
				TD	0250			576	361		26			01441		0410	) :	151	52									
				TD	0300			502	360		26			01390		0480		151										
			-	TD	0400			378	358	-	26		0	01305	4	0615		151										
	12	8	08		T0406			372	357		26		_		_			151										
		_		TD	0500			289	356		26		U	01248	U	0743		150										
	12	8	08		0511			276	356		26		_	01101	-			150										
	, ,			TD	0600			138	355		27		U	01106	r	0861		150										
	12	0	08	S TD	T0614			116 957	354 353		27 27		٥	00929	6	0962		150 150										
				TD	0800			808	352		27			00727 00 <b>78</b> 3		1048		149										
	12	R	08		0819			784	352		27		J	00103	_			149										
	12	. ~		ID	0900			707	351		27		0	00665	6	1121		149										
				TD.	1000			629	351		27			00577		1183		149										
	12	8	08	-	11019			616	351		27		_		-			149										
				ŤD	1100			578	35		27		0	00534	8	1238		149										
				TD	1200			535	351		27			00508		1291		149										
	12	8	08	S	1279	ı	0	506	351	01	27	77						149	26									
			S	TD	1300	1	0	499	35]	0	27	78	0	00485	1	1340	)	149	26									
			S	TD	1400	ı	0	468	350	7	27	79	0	00475	3	1388	3	149	30									
			S	TD	1500	l	0	442	350		27	79	0	00472	0	1436	5	149	36									
	12		08	c	11539		^	434	350		27	30						149										

	SHIP	LATITUI	DE 1/10	LON	GITUOE		RSDEN UARE	MO.	ŧG	N TIM		YEAR	CRUI	3.2	STA1	non	DEPTH TO BOTTO	DEPT	H O		VE LTIONS PER SE	WEA THER COD	CODES		51	ATION UMBER
73 9	55	3503	N	04	803 W	113	58	06	10	5 13	2 1	968	EI	2 0	17		4023	15	17		1	1 × 1	3 2		0	017
-,							*	ATER		WI	D	BAR	o- L	A IR	EMP.	SIA SI	NO.	SP	ECIAL	]						
							COL	R TRA	NS.	DIR.	SPEED	M ET		DRY		VET COD	OBS.	O acce	VATION!	1						
							COL		- 1	_	FORCE	(mb	-	BULB	-			1-		-						
									_ [1	14 5	03	26	1	224	1	92 6	14		,	L.,_				т		
ME	ESSENCE	CAST	CAF	20	DEPTH (m		1 °C		ς •	,	SIGM	A _ T	SPECI	FIC VO	LUME	₹ ∆ C	S	OUND	O <sub>2</sub> mt		04-6	TOTAL-	ND2-N	NO1-N	5104-51	рН
	TIME 07 R 1/10 T	NO.	144	, É	Derin u	"			,		310 11	^-,	ANG	MALY-	-x10,	x 103	. VE	LOCITY	0,1	P4	- 01/1	01/1 - وبر	μg = σ1/l	μg = 01/1	μg - αt/1	
								$\top$																		
- 1		- 1	51	ם ז	0000	' 1	989	3	636	5	258	4	00	216	54	0000	15	234	'	1						
	132		08		0000	1	989	3	635	56	258	4					15	234								
			S.	ΤD	0010	1	1933	3	63	5	259	8	00	203	39	0021		220								
			5	ΤO	0020		1884		63		261		00	192	11	0041		208								
	132		OB:		0025		1863		634		261							203								
				TD	0030		1843		634		262			182		0060	_	198								
				TD	0050		1784		634		263		00	169	4 B	0095	_	185								
	132		08		0051		1782		634		263		00		30	0126		184								
				ΤD	0075		1760		640		264		UU	160	29	0136		182								
	132		08		0075		760		64		264		00	159	24	0176		182								
			_	סק	0100		1746 1746		631		264		00	139	20	0176		182								
	132		OB:	o TD	0125		1737		64		265		οn	156	18	0215		184								
				TD	0150		1728		64		265			154		0254		186								
	132		OB:	-	0151		1728		64		265			• .				186								
	132			TD	0200		1712		63		265	-	00	155	05	0331		188								
	132		OB:		T0203		1710		63	72	265	6					15	188								
			S	TD	0250		1626	. 3	62	1	266	.3	00	149	44	0408	3 19	169								
			S	ΤD	0300		1547	' 3	60	5	267	0	00	144	43	0481	1 19	151								
	132		08	S	10399		1417		58		268	_						5123								
				TD	0400		1417		58		268		00	135	18	062		123								
	132		08		0497		1325		57		269							5108								
				T D	0500		1319	_	57		269		00	125	70	075		5106								
	132		OB.	_	T0591		1144		54		271		00	110	27	0869		5058 50 <b>54</b>								
				TD.	0600		1128	_	54		271			094		086		5010								
				TO	0700 0790		0964		553		272		00	U 7 4	00	09/		979								
	132		OB	S TD	0800		0845 0836		352 352		274		00	081	13	1060	-	4978								
				TD	0900		3748		352		275			068		1139	-	4961								
	132		08		0986		0680		52		276		- 0	500		110		4949								
	172			TD	1000		0669		352		276		00	058	00	119	_	4947								
				TD	1100		596		351		277			053		1254		933								
				ŤĎ	1200		053		351		27			051		1306		4925								
	132		08	_	1235		0520		551	07	27	76		_			1	4924								
	- / -			Ťρ	1300		0493		350	8	27	77	00	049	15	1350	5 14	4924								
			S	ΤD	1400	) (	0464	, 3	350	6	277	79	00	047	72	1409	_	4928								
			08		T1490		1450		350		278							4937								

REFERENCE	SHIP		TUDE	1.6	GITUDE	F .	A AR		STA	TION 1		YEA	$\Box$			A TOR'S		DEPTI	M A	TH.		WAVE RVAT		W	EA-	CLOUD	1		NODC
TEY ID.	COB		1.10	LON	1/10	DRIF	10"	1.	MO		4R,1/10		·* C	NO.	2	TATION IUMBER		10 0110		F			I SE	_1	ne l	TYPE AM	. I		UMBER
31127	3 55	350	4 N	04	803 W		113	58	06	17	128	196	8	E12	01	3		402	3 1	5	16		1	x	ı	6 6			0016
								WA	TER		WIND		ARO-	A	IR TEA	AP. °C	TVIE	NO.	Τ,	PECIA			,						
								COLOR	TRAN	S. DIR.	SPEE	D M	A ETER	3	RY JLB	WET	CODE	OBS.	Oper	RVAT									
								COUL	-		FORG			-		POTA	-		-		$\dashv$								
									ļ	13	507		268	2:	1 3		6	14		1		_			_				
	MESSE!	E OF NIT	CA		DEPTH	(m)	1	*C	1 ,	1/4.	Sic	MA-	, !	PECIFIC		ME S	AN, M	S	DUND	1 0	mt/1	10.		TOTAL		NO2-N	NO3-N	\$104-51	рН
	HR 1.		TY	PE										ANOM			x 103	VE	FOCITA			40.	at/I	₩B - 0	1/1	υg - σ1/l	μg - α1/l	yg - e1/1	
																				1								i	
				TD	000			994	36			87	- 1	0021	40:	3 0	000		236			•							
	1	28	OB		000			994		408		87							236										
				TD	001		_	960	36			94		0020			021		228										
		20		TD	002			923		36		02		0020	1056	5 0	042		219										
	1	28	0В	s TD	002		_	903 8 <b>75</b>	36	359		07		0018					215										
				TO	005		_	792		36		35		001			061 097		5208 5187										
	1	28	08	-	005			789		360		36		001	100	, 0	971		186										
	-			TD	007		_	754	36			46		0016	ነበፉ?		138		180										
	1	28	08	-	007			753		380		46				, ,			180										
		-		TD	010			745	36			49		0015	886	0 0	178		182										
	1	28	OB.	s	010		1	745		388		49			-	-			182										
			S	TD	012	5	1	735	36	38	26	551		0015	577	0.	218		183										
				TD	015		1	724	36	38	26	53		001	650	0	257	15	184										
	1	28	08		015			723		374		553							184										
				TD	020		_	700		35		57	-	001	44	0	335		185										
	1	28	08	-	T020		_	597		346		57							184										
			_	TD	025			521	36			66		0014			410		167										
				TD TD	030			5 <b>44</b> 408	36 35			84		0014			482		150										
	1	28	0B		T040			•00 •07		840		84	'	0013	יסכי	, 0	619		5120 5120										
	1	20		TD	0500		_	301	35			97		0012	2283		748		100										
	1	28	OB.	_	050		_	291		713		98		0012	. 20.	, ,	140		5098										
	-			TD	0600			128		49		112		0010	954	0	864		054										
	1	28	08		T060			121		479		113			_	-	- '		052										
	_			TD	070			929	_	27		30		0009	9258	3 0	965		996										
			S	TD	080	0	0	785	35	16	27	44	-	000	7909	1	051	14	957										
	1	28	08		081			772		154		46						14	954										
				TD	090			727	35			758		0006			124		952										
				TD	1000			671	35			68		000	75	1	186		947										
	1	28	08		T100			568		262		69							947										
				TD	1100			595	35			73		0009		_	241		933										
	1	28	0B	T D	1200			534 500	35	13 0 <b>9</b> 7		776		000	000	1	292		924										
	1	20		o TD	130			487	35			178		0004	833	, ,	342		922										
				TD	140			456	35			779		0004		_	389		925										
				TD	150			441	35			80		0004			437		935										
	1	28	08		T152			439		039		180					'		939										

REFER	IO.	SHIP	LATITU	O E	LONG	TUDE	DCTR	MAR SQU	SDEN		TION T		YEAR	CRU	ORIGIN	STATIO		DEP	0	MAX DEPTH OF		WAVE SERVATI		WEA-	CODE		5	NODC
900	NO.	0001	•	1/10	•	1/10		10"	1.	MO	DAY	R,1/10		N	0.	NUMB	ER	8011	IOM .	S"MPL	'S D18	HGT PE	A 32 B	CODE	TER AU	1	, h	LU A4 B F P
3 I þ	1273	S5	3503	N	048	)3 W		113	58	06	18	126	1968	EI	2 01	9		416	0	15	18		1	X I	4 6			0019
									WA	ER	1	VIND	BAR	20-	ASR TE	M.P. ℃	ZIV	NC		SPI	ECIAL							
									COLOR	TRANS	OIR.	SPEED	14.21		OPY RULB	W E	COD				VATIONS							
									-	-	14	508	28	-	218	16	-	14										
								_		-	17	300	20		210	10		-	•			4				_	-	
		MESSENG TIME HR 1/10	Y NO.	CAR	E E	OEPTH	(m)	1	$\sigma$	S	٠/	SIG	MA-T		OMALT-I		₹ △ D OYN. № x 10 <sup>3</sup>	١. ١	SOUN		02 ml/	PO a		TOTAL—P	NO2-N	NO3-N ug = a1/1	\$1.04=\$1 yg = at 1	
		•		<b>S</b> 1		000		2	026	36	39	25		00	2237	9	0000	1	1524	45								
		126	5	085		000			026		385	25							1524									
				51		001			983	36:		25	-		2143		0022		1523									
				SI		002			938	36		25		00	2042	7	0043		1527									
		120	5	083		002			920		352	26				_			152									
				51		003			883	363		26			1925		0063		521									
		126	4	S1 085		0050			793 793	36:	32 319	26		00	1732	1	0099		518									
		120	,	51		007			752	36:		26 26		00	1627	0	0141		1518 1511									
		126	4	085	-	007			752	361		26		00	1027	0	0141		51									
		120		085		009			728		338	26							51									
				S 1		010			727	36		26		00	1582	6	0181		51									
				51	_	012			703	36		26			1548		0221		51									
				S1	r D	015	0	1	683	36:	30	26	57		1524		0259	1	51	71								
		126	5	OBS	5	0150	)	1	683	363	301	26	57					1	517	71								
				S 1	ď	0200	)	1	654	362	27	26	62	00	1497	7	0335	1	517	70								
		126	5	OBS	5 1	020	1	10	553	36	265	26	61					1	517	70								
				S٦	-	025	)	1	589	36:	15	26	67	00	1455	5	0408	1	515	57								
				ST		0300			526	360		26		00	1420	5	0480	1	514	44								
		126	5	08.5		0396			410		353	26				_			512									
				ST		0400			407	358		26		00	1328	8	0618	_	512									
		126	•	OBS		0499			293	35		26			• • • •	_			509									
		124		ST		0500			291	35		26		UŲ	1230	2	0746		509									
		126	•	OBS		0599			116	354		27		^^	1004	_			505									
				S T		0600			114 922	354		27			1084		1861		504									
				ST		080			782 782	35		27			0778		0 <b>961</b> 1045		499									
		126		OBS		080			782	351		27		00	0110	7	1045	_	495									
			•	ST		0900			721	35		27		00	0678	0	1118		495									
				ST		1000			559	35		27			0576		1181		494									
		126	5	OBS		1002			558	35		27		- 0	0	-			494									
				ST		1100			580	35		27		00	0530	3	1236	_	492	_								
				ST	D	1200	)		519	35		27			0501		1288		491									
		126	5	085	5	1254	4	04	494	350	79	27	77						491									
				ST	D	1300	)	04	486	350	7	27	77	00	0486	6	1337		492									
				ST		1400	)	04	468	350	)6	27	78	00	0481	5	1386	1	493	30								
				ST		1500		04	450	350	)5	27		00	0475	9	1433	1	493	39								
		126		OBS	. 1	1519	5	04	447	350	47	27	79					1	494	40								

REFERENCE	SHIP	LATITU	DE	LON	GITUDE	E E M	ARSDEN DU ARE	1	STATIO	MTI	ME	YEAR			VATOR*	_		DEPTH	MAX. DEPTH	000		A VE	<	WEA-	CLOU				NODC
ODF NO	CODE		1/10	LON	1710	S NOC		_ I	MO D		R 1/10	IEAK	CRU		STATIO NUMBE		8	MOTTO	OF S'MPL"	l		N PER		CODE	TYPE A	_1			TATION NUMBER
31127	3 55	3503	-	048	303 W	11		В				1968	F1	2 02	0		4	023	15	17	1		0	X1	3 5				0020
	3 02	3303			, ,	1		WAT			IND	BAR			MP, °C		Τ	NO.			1	1 1	Ŭ	1 ~ 1	)	,			0020
							COL		TRANS.	DIR.	SPEED	MET	ER	DRY	WET		0.6	200	OBSERV	ZIAL									
							co	DE	1001		FORCE	_	-	BULB	BULI	-	+	-											
										14	507	27	8	218	50.	7 7		14											
	ALESSEN	CAST	CAI		DEPTH In		т *с		ς .	,	510.4	MA-T		IFIC VOL	UME	≨ ∆ 1 DYN, /	D.	SDU	ND	02 m1/1	I	FO4=F	١,	OTA L-P	NO2-N	NO	1-N	5104-5	
	HR 1/1	of NO.	TYI	PE	DEFIN III	"			,	••	3107	W-1	AN	OMALY-X	107	x 10 <sup>3</sup>	3	AFFO	CITY	Q 2 mi/1		ug + 01/		µg - ai/l	νg = at/		a1/1	μg = at/	
																	_						1			1			
	ı		s	TD .	0000	-	2068	8	363	В	256	65	်ဝဝ	2352	6 (	0000	)	152	56		1		1	'		ı	- 1		'
	11	6	08:	S	0000		2061	В	363	75	256	65						152											
			S	Tρ	0010		200;	2	363	8	258	83	00	2184	4 (	0023	3	152	40										
			S.	ΤO	0020		194	3	363	8	259	98	00	2040	6 (	0044		152											
	11	6	OB:		0025		191		363		260							152	19										
				ĬD	0030		189		363		26			1915		0064		152											
				TD	0050		181		363		26:		00	1737	8 (	100	0	151											
	11	6	OB:		0051		181		363		26:							151											
				TD	0075		177		364		264		00	1605	8 (	142	2	151											
	11	6	OB:		0076		177		364		264						_	151											
		,		TD	0100		175		364		26		00	1577	0 (	182	2	151											
	11	6	OB:		0101		175		364		26				_			151											
				ID	0125		174		364		26			1565		221		151											
	2.7			TD	0150		172		363		26!		00	1547	2 (	0260	J	151											
	11	0	OBS	o TD	0152 0200		1719		363		269		00	1504				151											
	11	6	0B:		10205		1661 1655	_	362		266		00	1506		336	0	151 151											
	- 1	0		TD.	0250		1574		361		266		00	1458	B (	0410	٦.	151											
				TO	0300		1493		359		26	-		1414		482		151											
				TO	0400		135		357		268			1309		0616		151											
	11	6	OE:		70402		135		357		268		•••		,	,,,,		151											
		-		TD	0500		125		356		269		00	1204	9 (	744	4	150											
	11	6	OB:		0507		124		356		270							150											
			S.	T D	0600		108	7	354	3	27	15	00	1064	0 (	858	8	150	139										
	11	6	08:	S	10610		1070	0	354	16	27	17						150	35										
			S	TD	0700		0908	8	352	5	273	33	00	0897	9 (	956	5	149	88										
			S.	TD	0800		077	l	351	5	274	46	00	0769	1 1	039	9	149	52										
	11	6	083		0819		0750		351		274							149											
				TD	0900		070	_	351		279			0659		1110		149											
				T D	1000		0644		352		276		00	0572	3	1172	2	149											
	11	6	083		1027		0626		352		27				_			149											
				ID	1100		057		351		27			0524		1227		149											
				TD	1200		051	_	350		27		00	0504	8	278	3	149											
	11	6	08		1288		047		350		27		00	0 4 <b>0</b> =				149											
				TD	1300		0472	_	350		27			0487		1328		149											
				TD TD	1400 1500		046		350		27			0482		1377		149											
	11	4	08		T1548		045: 044:		350		278		00	U#16		1425	,	149											
	11		UD:		11540		<b>→ →</b> ·	7	300	,,	210	50						149	7										

Table VII.—Observed and interpolated occanographic data for stations taken by USCGC HALF MOON at Ocean Station ECHO, 20 June-12 July 1968, prepared from NODC listing No. 31-1304

REFERENCE	1					_	MARSDEN	STATION	TIME		т ,	DRIGINA	A TO 8'S			MAX.		WAVE		1	Cront			
	SHIP	LATITU	DE	LONGI	TUOE	NDCT	SQUARE	IGM		YEAP	CRUISE	_	TATION	-	DEPTH	DEPTH	OB	SERVATIO	2NS	WEA-	COOES		2	NODC TATION
CTEY ID.	COOE	•	1/10	•	1/10	۵ <u>.</u> ۲	10* 1*	MO DAY	HR,1/10	1	NO.		HU M BE		BOTTOM	S'MPL"S	DIR.	HGT PER	\$ E A	CODE	TYPE AM	1	N	UMBER
311304	нм	3500	BN	0480	01 W		113 58	06 20	162	1968	E13	001	1		4297	15	14	0 5		×1	8 2		T	0001
31130	1	55-0					1	TER	WIND	BAF	1	AIR TEA			NO.	1		1- 1-		1		1		
							COLOS	TRANS OI	R. SPEE	D MEI		YAC	WET	CODI	085.	SPEI OBSERV	CIAL ATIONS							
							CODE	LPT C	FOR		a1 8	ULB	BULB		DEPTHS									
								2:	500	5   26	0 2	33	216	8	14									
	MESSENGE		CARE					1			LATCIE	. voru		ε Δ o	1	UND		PO4-		TOTAL-P	NO. 41	NO N	SI O4 - Si	
	TIME	OI NO.	TYPE		DEPTH (	m)	1 ℃	s %.	SI+	GMA-T		ALY-XII	02   0	x 10 <sup>3</sup>		DCHY	02 ml/	P9 - 0		49 - 01/I		NO3-N ug - m/l	µg - ot/	pН
	HR 1/10	-									-		-+-	X 10					-+-				-	
	1					.			- 1				.										Į.	I
			ST		0000		2187	3630		526	002	7218	B (	000		286								
	162	2	OBS		0000		2187	3629		526						286								
			ST		0010		2090	3632		554		4530		026		263								
	1.00		ST		0020		2013	3633		576	002	2522	2 (	049		244								
	162	:	OBS		0025		1982	36338		585	003	1 2 2 2		071		236								
			SĪ		0030		1970	3635		589		133				234								
	2.00	,	ST	_	0050		1900 1900	3636 3636		608	001	9600	U (	112		218								
	162	2	OBS						_	608	001					218								
	163	,	ST		0075		1763	3631		639	001	6749	5 (	158		182								
	162		OBS		0075		1763	3631		639	001		, ,			182								
	1.5		ST		0100		1734	3634		648	001	593	,	199		178								
	162	2	OBS		0100		1734	3634		648	001	554	3 0	238		178								
			5 T 5 T		0125		1712 1686	3634 3632		653 657		5217		276		176 172								
	162	,	OBS		0150		1686	3631		657	001	221	2 (	210		172								
	102		ST		0200		1625	3621		664	00.1	475	3 (	351		160								
	162	,	OBS		0200		1625	3621		664	001	<b>→</b> ().		,,,,,		160								
	102	-	ST		0250		1558	3610		671	001	423	7 (	1424		147								
			ST		0300		1491	3599		677		374		494		132								
	162	,	OBS		0397		1358	3578		690			_	, . , .	_	103								
	101	-	ST		0400		1354	3578		690	001	271	1 (	626		102								
	162	•	OBS		10494		1222	3559		703			-			071								
		•	ST		0500		1210	3558		704	001	159	7 (	747		067								
	162	2	OBS		10587		1052	3537		717						024								
			ST		0600		1028	3535		720	001	016	8 (	856	15	017								
			ST	0	0700	)	0865	3522	2	737	000	856	4 (	950	14	972								
	162	2	OBS	i	0790	)	0748	3515	1 2	749					14	941								
			ST	D	0800	)	0739	3515	2	750	000	727	2 1	029	14	939								
			ST	D	0900	)	0655	3514	2	761	000	625	1 1	097	14	923								
	162	2	OBS	1	10989	7	0593	3512	5 2	768					14	913								
			ST	D	1000	)	0587	3512	2	769	000	556	3 1	156	14	912								
			ST	D	1100	)	0536	3509	2	<b>77</b> 2	000	520	0 ]	210	14	908								
			ST		1200		0492	3506		775	000	493	5 ]	260		906								
	162	2	0 <b>B</b> S		1240		0477	3504		776						907								
			ST	D	1300		0457	3503	2	777	000	479	2 1	309	14	908								
			ST	-	1400		0429	3501		778		466		1356	_	913								
			ST	D	1500	)	0409	3499		779	000	464	0 ]	403	14	921								
	162	2	0BS	5 1	11502	2	0409	3499	0 2	779					14	922								

IO. COOR	LATITU		NGITUDE 1500N	M ARSO SQU AR	E	STATION TO		YEAR	ORIGIN CRUISE NO.	STATION	) N	DEPTH TO BDTTDM	MAX. DEPTH OF	D85	WAVE ERVATI	ONS	WEA- THER CODE	CLDUD		5	NOOC TATION
NO.		1/10	1/10	10*	1.	MO DAY H	R.1/10		NO.	NOMB	FK		S,Wbr.	OIII.	HGT PE	R SEA	1	TYPE AM	1	-+-	
304 HM	3501	4N 04	800 W	113	58 0	06 21 1	40 1	968	E13 00	2		4298	15	18		1	×1	8 2	1		0002
					WAT	ER V	VIND	BARO	A IP TE	MP. T	vis	NO.	506	CIAL							
				C	OLOR	TRANS. DIR.	SPEED OR	METE		W E BUL	1	DEPTHS		ZHOITA							
				-	006		FORCE	(mbs	-	-	_	$\vdash$									
						21	510	280	233	21	6 8	14					_				
MESSENGE TIME	CAST	CARD		1 1	_	s ·/	F1C 11		SPECIFIC VOLU	IME	₹ ∆ 0	sou	JNO	01//	PO	- P	TOTAL-P	NO2-N	NO3-N	5104-5	
HR 1/10	T NO.	1 Y P E	OEPIH lm1	'		3 '	SIGM		ANDMALY-X	107	X 10 <sup>3</sup>	, AETO	DCITY	0 2 ml/l	100	01/1	µg = 01/1	ug - al/l	μg - αI/I	µg - 01/	Hq
1710				+		<u> </u>	+								+	$\rightarrow$					_
l	! !	STO	0000	219	3.1	3633	252	7	002707	ا د	0000	152	227		1	1		I	1	I	1
140	`	085	0000	21		36331	252		002101	_	0000		287								
140	,	5 <b>T</b> D	0010	20		3633	255		002461	4	0026										
		510	0020	20		3633	257		002259		0049										
140	)	OB5	0024	198		36327	258		-02257	-			238								
140	_	STO	0030	196		3633	259		002124	8	0071										
		510	0050	186		3633	261		001907		0112		209								
140	)	0B.5	0050	186		36328	261						209								
140		085	0074	170		36358	264						183								
		STD	0075	17		3636	264		001647	2	0156		183								
140		085	0099	17	44	36353	264						181								
		STO	0100	17	43	3635	264	6	001610	3	0197		181								
		STO	0125	17	12	3634	265	3	001554	3	0236	15	176								
140	)	OBS	0149	16	83	36310	265	8				15	171								
		510	0150	16	82	3631	265	8	001515	7	0275	15	170								
		SID	0200	16.	25	3621	266	4	001477	5	0350	15	160								
140	)	085	T0200	16.	25	36208	266	,4				15	160								
		SID	0250	15		3613	266		001443	6	0423		153								
140	)	085	0299	15.		36043	267						143								
		SID	0300	15		3604	267		001402	4	0494	-	142								
140	)	085	T0398	13		35825	268						112								
		S <b>T</b> 0	0400	13		3582	268		001295		0629		111								
		STD	0500	12		3559	270		001190	8	0753		074								
140	)	OBS	0597	10		35407	271		0010			-	035								
		SID	0600	10		3540	271		001055		0865		033								
		STD	0700	0.8	-	3523	273		000865	4	0961		976								
140	)	OBS	0798	07		35132	274		0007-1		• • • •		937								
		510	0800	07		3513	275		000731		1041		937								
		STD	0900	06		3515	276		000630	_	1109		926								
1.0		570	1000	06		3517	27		000543	В	1168		919								
140	J	OB5	1000	06		35166	27		000523	e	1221		919								
		SID	1100	0.5 0.5		351 <b>1</b> 350 <b>7</b>	277 277		000527		1221		915 911								
1/6	`	STD	1200	04		35054	277		000502	)	12/3		911 910								
140	,	OB5 STD	1254 1300	04		35054	27		000475	0	1322		910								
		STD	1400	04		3502	278		000444		1368		909								
		STD	1500	03		3502	278		000403		1410		910								
140	n	OBS	11505	03		35018	278		000-03	,	1410		910								
140	•	003	11000	0 3	10	33010	210	, -				1 -4	,,,								

D.	SHIP CODE	LATITU	DE 1/10	LDNGI		30U 30U	ARE	((	ON TIA		FEAR	CRUISI NO.		ATOR'S	,	DEPTH TD BOTTON	DEPTH OF S'MPL	08	WAVE SERVATE		THER CDDE	CLOU CODI	5		NODC STATION NUMBER	
04	нм	3459	3N (	0480	0 w	1113	48	06 2	2 1	46 1	968	E13				4316	16	20		2	X 1	2 2	2	1	0003	3
							WA	TER .	w	ND	BARG	>- ⊢	AIR TEA		√IS.	NO.	SP	ECIAL								
							CODE	TRANS.	DIR.	OR FORCE	METE		DRY BULB	W ET		OBS. DEPTHS	OBSER	VATIONS								
									21	513	280		33	216	8	14	+									
	r —		T			_		$\vdash$	21	513	200	) 2	_ دد.	_					-				_	1		_
	MESSENGI		CARD		DEPTH (m)	1	*c	S	•	SIGM	1 <del>-</del> A		C VOLU	ME :	₹A. D	. SO	DCITY	02 m1/	PO4		OTAL-P	NO2-1				ı
	HR 1/10							-						$\perp$	¥ 103				120				. 59 - 0171	20.		_
														1					1	i		1				
			ST	D	0000		198	362		251		002	7930	0 (	1000		288									
	146	5	OBS		0000		198	362		251							288									
			ST		0010		082	362		255			461		0026		260									
			STI	D	0020		988	363		258		002	2036	5 (	050		237									
	146	6	OBS	_	0026	_	941	363		259							225									
			ST		0030		922	363		260			0314		071		220 199									
	1.	,	STI	U	0050		834	363		262		001	827	2 (	0109											
	146	ь	085	_	0052		826 744	363 363		262 264		001	4 301	0 /	152		197 177									
	1.4	,	STI	U	0075	-		-		_		001	620	0 (	1152	_	175									
	146	О	085	6	0079		734	363		264		001	552	, ,	192		171									
	146		STI OBS		0100		712 707	363 363		265 265		001	553	2 (	1192		171									
	140	o .	STI		0125		701	363		265		001	536	3 (	231		172									
			STI		0150	_	689	363		265			524		269		173									
	14	6	OBS	0	0161	_	683	363		265		001	- 2. 4.	- '	,,,		173									
	14.	0	STI	n	0200		655	362		266		001	4999	9 (	345		170									
	14	6	OBS	-	0217	_	640	362		266	-						168									
	-	_	STI		0250		607	361		266		001	466	4 (	419		163									
			STI		0300		545	360	9	267		001	418	1 (	0491	15	151									
	14	6	085		0324	1	510	360	24	267	6					15	143									
			ST	D	0400	1	366	357	6	268	6	001	3100	0 (	0627	15	106									
	14	6	085	T	0429	1	314	356	80	269	1					15	092									
			ST	D	0500	1	202	355	5	270	3	001	166	3 (	751	15	064									
			ST	D	0600	1	052	354	0	271	9	001	022	9 (	0861	15	026									
	14	6	08.5	T	0646	0	986	353	150	272	7						009									
			ST	D	0700	0	905	353	1	273	7	000	856	3 (	955	14	988									
			5 T	D	0800	0	773	352	2.5	275		000	706	2	1033	14	954									
	14	6	OBS		0864		702	352		276							936									
			5 <b>T</b>		0900		669	351		276			616		1099		929									
			51	-	1000		589	351		276		000	551	8	1157		913									
	14	6	OBS		1083		537	350		277		000		~			905									
			ST		1100		530	350		277			511		1210	_	905									
			SI	-	1200		495	350	-	277			497		1261		907									
			51		1300		466	350		277		000	484	U	1310		912									
	14	6	085		1357		452	350		277		000	. 70	,			916									
			51		1400		443	350		277			0470		1358	_	919									
	, .	,	51		1500		427	350		277		000	466	2	1404		929									
	14	0	OBS		1633	Ų	415	350	120	278	1					14	947									

EFERENCE SHIP LA	1/10 LC	ONGITUDE 300	MARSDEN SQUARE	STATION TO (GMT)	YEAR		OR'S NOIT	10	MAX. DEPTH OF S'MPL'S	OBS	WAVE RVATIO		WEA- THER CODE	C	OUD DDES			NODC STATION NUMBER
+			113 57			E13 004		4261	09	25	701	2		1	6		-	0004
11304(1111) (33	01111   0-	1750711 1.	WA		WIND T	A IO TEAL	. °C	NO.			'		,	. ,		,		
			COLOR	TRANS. DIR.	SPEED ME OR (mi	TER DRY	WET COS	0.05	SPEC AVR328C									
				25	509 24		217 8	12										
MESSENGR CA		DEPTH (m)	1 %	s •/	SIGMA-T	SPECIFIC VOLUM ANOMALY-X107		۸.		0 g ml/l	PO4-		1014 L=P ug - 01/1	NO:		NO <sub>3</sub> -N yg - at/l	\$1 O4\$ ug - 01/	
							1		_			1			- 1			
	SID	0000	2187	3638	2532	0026582	0000											
101	OBS	0000	2187	36384 3640	2532 2570	0023049	0035	1528 1529										
	STD	0010 0020	2055 1958	3641	2570	0023049	0025											
101	OBS	0022	1943	36411	2601	0020361	004	152										
101	STD	0030	1923	3644	2608	0019513	0067											
101	OBS	0044	1873	36448	2621	001//1/	000	152										
101	STD	0050	1834	3642	2629	0017568	0104											
101	OBS	0065	1762	36367	2643			151										
	STD	0075	1743	3635	2646	0016018	0146											
101	OBS	0086	1727	36338	2649			151										
	STD	0100	1722	3634	2651	0015675	0189											
	STD	0125	1708	3635	2655	0015393	0224											
101	OBS	0131	1704	36350	2656			151										
	SID	0150	1685	3632	2658	0015153	0262											
101	OBS	T0179	1656	36267	2661			1510	67									
	STD	0200	1638	3625	2664	0014761	0337	7 1516	65									
	STD	0250	1585	3617	2670	0014322	0410	1519	56									
101	OBS	0264	1567	36137	2671			151	52									
	STD	0300	1509	3602	2676	0013911	0480											
101	OBS	T0353	1426	35869	2682			151	19									
	STD	0400	1354	3576	2689	0012856	0614	1510	02									
	STD	0500	1203	3557	2704	0011536	0736	5 150	65									
101	OBS	T0528	1162	35524	2709			150										
	SID	0600	1054	3541	2720	0010191	0845											
	STD	0700	0915	3530	2735	0008803	0940											
101	OBS	0718	0892	35283	2737			149										
	SID	0800	0791	3523	2749	0007491	1021											
	STD	0900	0679	3521	2763	0006090	1089											
101	OBS	T0904	0675	35207	2764			149	32									

ID.	SHIP	LATITUO	DE L	ONGITUOE	と	AARSDEN SQUARE	STATION TH	VE YEAR	CRU		STATI	ION	DEP	)	H Da	WAVE SERVATIONS		CODES			NODC
NO.	CODE	•	1/10	1/10		0. 1.	MD DAY HE	1,1/10	N	0.	NUM	BER	BOTT	S'MPL	.°S DIA.	HGT PER 3	FA COD	TYPE AM	7		NUMBER
04	HM	35009	O NE	47593W	1			30 1968	E	3 00	5		448	0 44	27	2 3	× 1	8 6			0005
						WAT		SPEED MET		AIR TE	_		ND OB	.   51	ECIAL						
						COLDR	TRANS. DIR.	FORCE (mb		DRY BULB	Bu	LET CO	DEPT	HS DBSER	VATIONS						
							24	518 20	0	222	2	17 7	20								
	MESSENGR	CAST	CARD	06874 (-)	Т	1.10	T ,		SPEC	IFIC VOLU	JME	₹ △ I	.	SDUND	016	PO4-P	TOTAL-	NO <sub>2</sub> -N	NO3-N	5104-5	
	HR 1/10	NO.	TYPE	DEPTH (m)		, ,	s ·4.	SIGMA-T	AN	C-YJA MO	10'	X 10	".   ·	FLOCITY	D2 ml/	µg - a1/1	µg + 01/		µg + a1/	ug = al.	
					$\top$																
			SID	0000		2170	3635	2535	00	2636	8	0000	) i	5282							
	101		085	0000		2170	36351	2535						5282							
			STD	0010		2076	3637	2562		2380		002		5259							
			SID	0020		1993	3638	2585		2165		004		5239							
			STD	0030		1921	3639	2605	00	1982	6	006		5221							
	101		OBS	0033 0050		1902	36392	2610	0.0	1720	,	010		5216							
	101		OBS	0064		1814 1762	3638 36376	2631 2644	00	1738	1	010		5194							
	101		STD	0075		1746	3637	2647	00	1591	2	014		5181 5178							
	101		085	0077		1717	36369	2654	00	1971	2	014		5173							
	101		STD	0100		1714	3636	2654	00	1536	n	018		5172							
			STD	0125		1688	3632	2657		1513		022		5168							
	101		085	0129		1683	36317	2658	-		•	VLL.		5167							
			STD	0150		1653	3626	2661	00	1486	3	026		5161							
	101		OBS	0193		1600	36174	2667						5151							
			SID	0200		1596	3617	2667	00	1440	6	033	<b>)</b>	5151							
			STO	0250		1553	3609	2671	00	1420	1	040	7 1	5145							
	101		OBS	T0258		1544	36077	2672						5143							
			STD	0300		1470	3593	2677	00	1373	3	047		5125							
	101		OBS	0383		1346	35714	2687						5096							
			STO	0400		1331	3570	2689		1282		060		5093							
			STD	0500		1225	3559	2702	00	1181	2	073	_	5073							
	101		085	0510		1213	35580	2703						5070							
			STD	0600 0700		1048 0889	3543	2722		0993		084		5025							
	101		STD	T0761		0805	3529	2738 2746	UU	0844	כ	093		4982							
	101		STD	0800		0757	35227 3520	2751	0.0	0718	1	101		4959 4947							
			STD	0900		0649	3513	2761		0623		107		4920							
			STO	1000		0566	3509	2769		0548		113		4903							
	101		085	1018		0553	35080	2770	• •	0 ) 40		115		4901							
			STD	1100		0519	3507	2773	00	0511	3	1190		4901							
			STD	1200		0483	3505	2776		0488		124		4902							
	101		085	T1274		0459	35036	2777						4905							
			SID	1300		0451	3503	2778	00	0471	2	128		4906							
			STD	1400		0424	3500	2778	00	0467	2	133		4911							
			STD	1500		0402	3498	2779	00	0462	0	138	2 1	4918							
	101		OBS	1597		0387	34967	2780						4928							
			STD	1750		0385	3498	2781	00	0461	3	149		4953							
	101		085	T1932		0377	34984	2782						4981							
			STD	2000		0372	3498	2782	00	0462	1	161		4990							
	130		085	T2123		0362	34981	2783	^^					5007							
	120		STD	2500		0330	3497	2785	υO	0449	5	184		5058							
	130	,	085	2661		0315	34959	2786	0.0	0.25	0	204		5079							
	130		STD	3000		0280	3493	2787	UÜ	0435	y	206		5122							
	130			3200		0263	34923	2788	^^	0120		24.0		5149							
	130		STD	4000 T4086		0228	3490 34892	2789 2789	00	0428	4	249		5274							
			085	14086		0226 0223	34892 34891	2789						5289							
	130													5316							

ID.	SHIP	LATITU	DE	LON	GITUDE TOUR	sou	SDEN		ION TI		YEAR	CRUIS	ORIGIN	TATION		DEPTH TO BOTTO	OF	1 DB	WAVE SERVATIO		WEA- THER CODE	CLOUD		51	NODC TATION UMBER
NO.			1/10		1/10 2	10*	1"	MO	H YAC	R,1/10		NO.	1	UMBER		80110	N S'MPL	S DIF.	HGT PER	5 E A	CODE	TYPE AM	ļ	- 1"	Owetz
304	нм	3458	5N	048	802 W	113	48	06	25 2	23	1968	E13	00	6	- 1	4480	16	28		5	X 1	8 5		1 1	0006
, ,		5 . 5 0	2.1		,	,	WA			ONIV	BAR		AIR TE		1	NO.	1		,	'					
							COLOR	TRANS	DIR.	SPEED	MET	ER	ORY	WET	CODE	Q85.	OBSER	ECIAL VATIONS							
							CODE	(m)	01	FORCE	(mb	•> 1	BULB	BULB		DEPTH	,								
									31	516	14	0 2	11	194	7	14	İ								
	MESSENGA	T		_ [		T		1		1		Lucu.	C 1/0//		Λο	1	21112		-00			NO. N	NO3-N	90.6	
	Trant I	NO.	CAR		DEPTH (m)	1	*C	S	٠/	SIG	1 – A N	ANON	C VOLU	07° C	Δ 0 γN. M χ 10 <sup>3</sup>	. VE	LOCITY	O2 ml/	PO4-		OTAL-P ug - 01/I	NO7-N ug - 01/1	μg = αt/l	\$1 O4 - \$1 99 - 01/1	ρH
-	HR 1/10	-	-			+		+		-		<del> </del>			X 10-	+-			+	+				-	-
		l		- [				+		1															
			ST		0000	_	103	36		25		002	483	7 0	000		264								
	223		083		0000	_	103		319	25							264								
			S 1	_	0010		091	36		25			454		025	_	263								
			51		0020	-	078	36		25		002	425	0 0	049		261								
	223		085		0028	_	8 60		322	25		007			070		260								
			51		0030		048	36		25			345		073		255								
	222		51		0050		882	36		26		001	908	9 0	115	_	213								
	223	3	085		0055		851		375	26		001		- ^	140		205 185								
	222		51	_	00 <b>75</b> 00 <b>8</b> 2		770 751	36		26 26		001	657	5 U	160		180								
	223	'	085 51		0100		732	36	352	26		001	584	е о	201		178								
	223	1	085	_	0108		720		338	26		001	. ) 0 4	0 0	201		175								
	223	,	51		0125		684	36		26		001	519	a 0	239		167								
	223		089	_	0132	-	671		282	26		001	717	, ,	200		164								
	223	'	51		0150		660	36		26		001	502	1 0	277		163								
			57		0200		621	36		26			474		352		159								
	223	ı	089		T0216		607	36		26							157								
			51		0250		573	36	13	26		001	434	8 0	424	15	152								
			S1		0300	1	516	36	03	26	75`	001	398	9 0	495	15	141								
	223		085	5	0321	1	489	35	992	26	78					15	135								
			S 1	D.	0400	1	371	35	80	26	88	001	291	1 0	630	15	108								
	223	!	089	5	T0421	1	338		753	26	92					15	100								
			S 1		0500		193	35		27			141	-	751		061								
			\$1		0600		029	35		2 <b>7</b>		000	996	7 0	858		018								
	223	}	083		T0625		991		344	27				_			8008								
			51		0700		882	35.		27			832		950		979								
	D# -		\$1		0800		761	35.		27		000	702	3 1	026		949								
	223	3	083		0832		728		214	27		000			^^-		941								
			51		0900		673	35.		27			607		092		931								
	222		51		1000		607	35		27		000	540	1	149		921								
	223	,	083		T1041 1100		584	35	169	27 27		000	513	, ,	202		918								
			\$1 \$1		1200		540	35		27			)493		252		927								
			51		1300		508	35		27			483		301		930								
	223	ı	083	_	1311		504		115	27		000	, <del>4</del> U J	· 1	501		930								
	423	,	51		1400		1473	35		27		000	474	9 1	349		932								
			51		1500		435	35		27			462		396		933								
	223	ι	083	-	T1583		401		992	27			, , , ,		2.0		932								

ENCE	SHIP			-	≝ MAR	SOEN	STATION TI		OR	RIGINA	TOR*S	DEPTH	MAX. DEPTH		WAVE		WEA-	CLOU		Τ,	NODC
10. NO.	CODE	1/10	LON	GITUDE \$	Z 10.	ARE 1°	MO DAY H	YEAR R.1/10	CRUISE NO.		ATION I MBER	#0110 <i>N</i>	1 01	"	HGT PER		THER	TTPE AA			LATION
304	нм	35032N	047	7581W	1113			01 1968		007		4334	14	29	3 3		X1	8 2			0007
						WA	,	SPEED MET	0-	R TEMI	VIS.	NO. 085.		CIAL							
						COLOR	TRANS. DIR.	DR (mb			WET COD	DEPTHS	OBSERV	ATIONS							
							33	507 18	0 20	6	172 8	14		-							
	MESSENGE	T					133	1				-			1				T		
	FIAME	CAST CAL		DEPTH (m)	1	°C	s */	SIGMA-T	SPECIFIC 1	VOLUM LY-X107	1 DAN' W X 103	. VEL	OCITY	02 ml/	PO4=P		01/1	NO2-N ug - at/l	NO3-N pg - at/l	\$1 O4\$1 pg = 61/1	ρН
	HR 1/10		-				-	ļ			X 10°	-			+	1		-	P 4 - 2.07	7.	
		1	Τ.	0000	_	007	2643	2550	000	000	0000	1	24.			1	ı		l		
	101		TD	0000		097 097	3641	2559 2559	0024	038	0000		264								
	101		TD.	0010		072	36408 3640	2565	0023	4.86	0024		264 259								
		_	TD	0020		026	3639	2577	0023		0047		248								
	101	_	-	0022		015	36389	2580	0022		0041		245								
			TD	0030		936	3639	2601	0020	218	0068		225								
	101	OB:	S	0045	1	826	36384	2628				15	196								
			TD	0050		804	3636	2632	0017	289	0106	15	191								
	101			0067		751	36329	2643					178								
		_	TD	0075	_	745	3635	2646	0016	064	0147		177								
	101			0089		734	36365	2650	0016		0107		177								
			TD TD	0100 0125		726 703	3636 3634	2651 2655	0015 0015		0187		176 173								
	101	_	-	0134	_	693	36321	2656	0015	330	0220		171								
	101		T D	0150		669	3628	2659	0015	080	0264		166								
	101	_		T0180		626	36204	2663			020,		157								
			TD	0200		599	3616	2666	0014	545	0338		152								
		S i	T D	0250	1	530	3605	2673	0013	992	0409		137								
	101	. OBS	5	0267	1	507	36011	2675		-		15	132								
			ΤD	0300	_	463	3594	2630	0013	513	0478		123								
	101			T0356		384	35812	2687					105								
		_	TD	0400		307	3570	2694	0012		0607		085								
	101	_	T D	0500		143	3548	2709	0011	065	0724		043								
	101		T D	T0528 0600		100 989	35432 3535	2713 2726	0009	400	0927		032								
			TD.	0700		909 859	3526	2741	0008		0827 0915		003 970								
	101	_	_	0710		847	35256	2742	0008	114	0717		967								
			īD	0800		763	3525	2755	0006	907	0991	_	950								
	101			T0897		682	35225	2764			• • • •	-	934								
		S	ΙD	0900		679	3522	2764	0006	017	1055	_	933								
			ſΟ	1000		600	3515	2769	0005	527	1113	14	918								
			ΤO	1100		540	3511	2774	0005	108	1166		910								
	101			1140		521	35092	2774					908								
			TD	1200		499	3509	2777	0004		1216		909								
	101		TD	1300		477	3509	2779	0004	659	1263		917								
	101	OBS	5	T1393	U	475	35080	2779				14	932								

REFERENCE																						
CTRY ID.	COOE	LATITU	DE LO	NGITUOE E	MARSOEN	STATION T	IME ,	EAR.	ORIGINATOR'S		DEPTH	MAX.	0.00	WAVE OBSERVATIONS		CLOUD			NOOC			
COOF NO COOF		1/10		1/10	10" 1"	MO DAY H			CRUISE NO.	STATIO		BOTTOM		1 0		COR		_		STATION NUMBER		
311304	нм	3500	8N 04	47589W	113 57			949	E13 00			4426		J UIK.	NGI PER SI	-	TTPL AM	_			-	
					WA		VINO		A 10 7	EMP. T		4426	44	1		X1	0 1	ì		000	8	
					COLOR	TRANS DIA	SPEED	BARO	V-			NO. 085.		CIAL								
					COOF	COOF (m)		Imbe	e) BULB		.8	OBS. DEPTHS	OBSERVATIONS									
						25	513	220	217	206 8		21										
	MESSENGR TIME C	CAST	CARD	OEPTH (m)	r tc	5 %.			SPECIFIC VOL	IIM2	₹ △ D	sou	IND.		100 1						T.	
	HR 1/10	NO.	TYPE	O(F) H (III)	1 ' '	, ,	SIGMA	1-1	ANOMALY-	1107	X 103	VELC	CITY	0 2 ml/l	PO 4-P	101AL-P	NO2=N µg = al/1	NO3-N	\$1 O4=		,  j	
										-					+		-	-			-17	
	071		SID	0000	2092	3636	255	7	002424	. 1	0000	152	2.62				1				- 11	
			OBS	0000	2092	36362	255		002424		0000	152										
			STD	0010	2080	3636	2560	)	002398	34	0024	152										
0.7			510	0020	2068	3636	256:	3	002373		0048											
	071		085	0023	2064	36355	2564					152	258									
	071		SID	0030	2006	3638	2582		002201	9	0071											
	071		085 STD	0048 0050	1880 1867	36403	2616			_		152										
	071		OBS	0072	1764	3640 36356	2619 2642		001850	7 1	0111	152										
			STD	0075	1760	3636	2643		001634	1 .	0155	151										
	071		085	0095	1736	36373	2650		001034	. 1	0133	15 I 15 I										
			STD	0100	1729	3637	2651		001563	3 1	0195	151										
			STD	0125	1697	3634	2657		001519		0233	151										
	071		OBS	0143	1676	36310	2659	)				151										
	071		STO	0150	1670	3630	2660		001495	7 (	271	151	67									
	071		OBS	T0192	1627	36227	2665					151	60									
			STD	0200 0250	1616	3621	2666		001455		345	151										
	071		085	0290	1544 1485	3608 35974	2672 2677		001407	7 (	0417	151										
			STD	0300	1459	3593	2680		001350	1 /	485	151										
	071		OBS	T0384	1305	35666	2692		001330	1 (	1400	151 150										
			STD	0400	1282	3564	2694		001229	4 (	614	150										
			STD	0500	1140	3549	2710		001093	-	731	150										
	071		085	T0569	1041	35396	2721					150	17									
			STD	0600 0700	0989	3535	2726		000948		833	150										
	071		OBS	0766	0839 0757	3522	2741		000814	5 (	921	149	_									
	0.1		STD	0800	0722	35162 3515	2749 2753		000701			149										
			STD	0900	0632	3513	2763		00070 <u>1</u> 000599		997 062	149										
	071		OBS	T0966	0585	35113	2768	`	000),,,	, ,	062	149 149										
			SID	1000	0570	3511	2770	(	000539	8 1	119	149										
			STD	1100	0529	3509	2773		000510	-	171	149										
	0.73		SID	1200	0494	3507	2776	(	000488	9 1	221	149										
	071		085	1215	0489	35067	2776					149										
			STD	1300 1400	0465 0440	3504	2777		000482		270	149										
	071		OBS	T1472	0424	3502 35004	2778 2779	(	000473	9 1	318	149										
			STO	1500	0421	35004	2779	(	000472		365	149 149										
			STD	1750	0396	3500	2781		00461	-	482	149										
			SID	2000	0373	3499	2783		00458		597	149										
	071	1	085	T2026	0371	34988	2783					149										
			STD	2500	0336	3497	2785	0	00458	2 1	826	150										
	071		0BS	2640	0321	34960	2786					150										
	071	1	0BS STD	T2999 3000	0273	34931	2788					151										
	071		OBS	T3548	0273 02 <b>3</b> 4	3493	2788	C	004254	+ 2	047	151										
	1	,	510	4000	0234	34908 3490	2789 2789	_	000610			1519										
	071		DBS	4062	0223	34894	2789	C	004193	, 2	469	152										
	071		085	T4326	0224	34888	2788					1533										
	071	(	DBS	4425	0224	34888	2788					1534										

CODE	LATITU	DE L	ONGITUDE	MAR SOU	SDEN IARE	STATION I		YEAR		TOR'S ATION UMBER	DEPTH TO BOTTON	DEPIR	08	WAVE SERVATIONS HGT PER S	- 00	ER COOES	}	51	NOOC TATION UMBEP
4 HM	3501	7N 0	47585W	113	57	06 28	101 1	968	E13 009		4279	15	29	2 3	X	1 6 7		- 1 (	0009
					WAI	ER	ONIW	BARG	- AIR TEM	P. *C VIS	NO.	SPE	CIAL						
					COLOR	TRANS DIR	SPEED	M ET I		WET CO	DEPTHS		VATIONS						
					2001		FORCE	+-	-		+								
						27	514	19	3 222	211 8	14	i,		<u> </u>			,	,	,
MESSEN	CAST	CARD	OEPTH (m)	,	*c	s */	SIGN	4 A _ 7	SPECIFIC VOLUA	YE SA	so	UND	0 2 ml/	PO4-P	TOTAL		NO3-N	SI 0 +-SI	рн
HR 1/1	및 NO.	TYPE	OEFTH BII)	- 1 '	C		1,5%		ANOMALY-110	x 10 <sup>2</sup>	" VEL	OCITY	0 2 1111	yg - 01/I	10 - 19 س	ا/اه - ولا ا/	μg - α1/l	μg - α1/l	,,,
			<u> </u>																
	1	STD	0000	2	103	3635	255		0024592	0000	15	265		1	1	1	1	1	
10	1	085	0000		103	36353	255		0024772	000		265							
10	•	STD	0010		081	3637	25€		0023964	0024		261							
		STD	0020		059	3638	256		0023341	0041		257							
10	1	085	0025		048	36385	257					255							
	_	STO	0030	1	985	3637	258	36	0021562	0076	15	238							
10	1	OBS	0048	1	823	36337	262	26			15	195							
		STD	0050	1	818	3634	262	27	0017767	0110	15	194							
10	1	085	0073	1	762	36361	264	13			15	182							
		SID	0075	1	758	3636	264	13	0016294	015	2 15	181							
10	1	085	0096	1	720	36342	265	51				173							
		SID	0100	1	719	3634	265	52	0015605	019	2 15	174							
		SID	0125		708	3634	265	4	0015466	023		174							
10	1	OBS	0143		696	36336	265					174							
		SID	0150	1	690	3633	265		0015195	026		173							
10	1	085	T0192		646	36251	266					166							
		SID	0200		634	3623	266		0014817			163							
		STO	0250		555	3610	26		0014172	041		146							
10	1	OBS	0287		492	35987	26					131							
	_	SID	0300		465	3594	26		0013555	048		123							
10	1	085	0382		312	35674	269		00.2222			084							
		STO	0400		288	3565	269		0012339			078							
10	,	STD 085	0500 T0572		151 047	3549 35392	270 271		0011140	073		046							
10	1		0600		994	3535	272		0009575	083		005							
		SID	0700		830	3522	274		0008001			959							
10	1	085	0772		734	35152	275	-	0000001	. 072	-	933							
10	•	ST0			706	3514	279		0006849	099		926							
		STD			618	3512	276		0005864			908							
10	1	085	T0977		564	35096	27		~~~	. 100		899							
10	•	SID			554	3509	27		0005323	111		899							
		STD			514	3507	27		0005045	_		899							
		STD			482	3505	27		0004874			902							
10	1	085	1243		470	35040	27					904							
		STD			457	3503	27		0004792	126		908							
		STO			439	3502	27		0004726			917							
		STD			430	3502	27		0004703			930							
	1	085	T1512	_	429	35017	27					932							

EFERENCE	SHIP			MARSOEN	57 A \$100	****												
10. NO.	CODE	LATITUDE	LONGITUDE	SQUARE	STATION	TIME YEA		GINATO		OEPTH	MAX. DEPTH		WAVE	WE	L- CLOUR			
+	1	1/10	1/10	10" 1"	MO DAY		CRUISE NO.	STAT	BER	#OTTOM	OF.		ERVATION	177	ve .			NODC STATION
11304	HM	34596N	047597W	113 47	06 29	102 196	8 E13 C				S'MPL'S		HGT FIE	STA	TEPE A N	T.		N U M 8 E R
				, w	ATER	WIND	4 1 - 4 - 5   4	TEMP.	-	6367	15	18	1 1	3   X1	6 7	1	- 1	0010
				coro	R TEAMS DO		ETER ORY		VIS		SPEC	IAL						
				con	E (m)		mba) BULB			DEPTHS	OBSERVA	SHOIT						
					0.5	S18 2	30 194	18	3 8	14		_						
	MISSENGE TIME HR 1/10	CAST CAR		7 %	s ·4.	SIGMA-T	SPECIFIC VO		₹ ∆ p	<del>  -   -   -   -   -   -   -   -   -   -</del>		02 m1/1	PO4-P	TOTAL-	ND2-N	NO3-N	SI 04-Si	
					_				x 103				FE - 01/1	#g = 01/	≥g - at/1	μg + αt/?	µg = a1/1	
		່ s⊺	D 0000	2075	3633	2559	20212				- 1		1					_
	102	OBS	0000	2075	36332		00240	18	0000							,	1	1
		sT	D 0010	2076	3634	2559	00340	, -		1525								
		ST	D 0020	2077	3634	2559	00240		0024									
	102	OBS	0025	2078	36340	2559	00241	12	0048									
		ST	D 0030	2041	3635	2570	00223	~ 7		1526								
	102	OBS	0049	1905	36375	2608	00231	21	0072									
		ST	D 0050	1896	3637	2610	00194	20		1521								
	102	OBS	0073	1745	36337	2645	00194	30	0114	1521								
		ST	D 0075	1743	3634	2645	00161	1 2	0150	1517								
	.102	OBS	0097	1723	36337	2650	00161	12	0159	1517								
		ST		1721	3634	2651	001570	0.5	0100	1517								
		ST	D 0125	1703	3632	2654	001548	_	0198	1517								
	102	OBS	0145	1684	36307	2657	00154	02	0237	1517								
		51	0150	1678	3630	2658	001513	20	0276	1517								
	102	085	T0194	1622	36208	2664	00131	,	02/6	1516								
		ST		1614	3619	2665	001466	s n .	350	1515								
		ST	0250	1546	3607	2671	001419			1515								
	102	OBS	0289	1489	35983	2677	00141)	, 4	1422	1514								
		STO	0300	1471	3596	2679	001353		492	1513								
	102	OBS	T0385	1336	35760	2693	001000	, ,	1472	1512								
		ST		1313	3573	2695	001225	. 1	621	1509								
		STE		1159	3553	2710	001099		737	1508								
	102	OBS	T0584	1027	35384	2722	,	,	1151	1504								
		STO		0995	3536	2726	000951	9 6	839	1500								
	100	SID		0821	3521	2743	000793		927	1495								
	102	OBS	0777	0717	35142	2753		2	721	1495	-							
		STD		0697	3514	2755	000671	5 1	000	1492								
	100	STD		0620	3512	2764	000589	-	063	14909								
	102	OBS	T0977	0570	35103	2769		- 1	000	14901								
		STD		0559	3510	2770	000531	9 1	119	14901	_							
		STD		0516	3508	2774	000499	-	171	14900								
		STD OBS		0478	3505	2776	000482		220	14900								
	102		1230	0468	35045	2777	32			14901								
	102																	
	102	STD	1300	0446	3503	2778	000464	5 1	267									
	102						0004649	- 4	267 313	14904								

	HIF LATITU	DE   L0	CNGITUDE TON		STATION T	TEAR		TATION	201.04 2.04 00 00 061.4 061.	01	WAVE SERVATIONS INGEREE SE			÷	5*	1000 14110N UMBB
04 H	M 3500	N C	48011%	_			E13 011		4169 14	0.3	2 3	×1	8 3		(	0011
				COLOR	TER DOL	SPEED WE	RO- AR TEN	- 15	NO. 59	ECIAL VATONS						
				CODE		FOTOE UM		BULB	DEFTHS DESER	,, ,,,						
					07	S13 25	228	211 7	14							
₩ E S	SENGE CAST	CARD TYPE	D€#*H (=	1 2	s ·	SiGMA=1	SPECIFIC HOLLS		SDUND SDUND	02 =	PC4=P 45 = 85	*0*4.u# #\$ = #1/1		503-5 31 - 21	5. 04=5 41 + 81	;-
		STD	3000	2097	3633	2553	0024580	. 0000	15263							
	101	OBS	0000	2097	36333	2553	0024560		15263							
	101	STD	0010	2098	3633	2553	0024639	0025	15265							
		SID	0020	2099	3633	2553	0024707									
	101	385	0024	2099	36332	2553	0024101	0049	15267							
	101	510	0036	2026	3634	2573	0022816	0073								
	101	085	0149	1850	36364	2521	0022010	, , ,	15204							
	101	STD	0050	1844	3636	2522	0018243	0114								
	101	OBS	2073	1745	36340	2645	301024.	. 0114	15177							
	101	SID	0075	1744	3634	2645	0016099	0157								
	101	OBS	0097	1721	36365	2653	001007	015	15174							
	101	STD	0100	1718	3636	2653	0015452	0196								
		SID	0125	1694	3633	2657	0015203		15170							
	101	OBS	0146	1670	36291	2659	0010203	. 0233	15166							
		SID	0150	1665	3628	2660	0014989	0273	15165							
	101	085	T0196	1602	36176	2666	001476.		15152							
		STD	0200	1596	3617	2667	0014406	0346								
		STD	0250	1524	3604	2674	0013935									
	101	085	0291	1468	35947	2679			15123							
		STD	0300	1458	3593	2680	0013480	0485								
	101	085	T0388	1346	35778	2692	0013400	. 0-05	15097							
	• • •	STD	0400	1327	3575	2694	0012389	0615	15093							
		STD	0500	1164	3551	2707	0011237									
	101	085	T0573	1044	35369	2718			15019							
		STO	0600	0988	3533	2725	0009617	0837								
		STD	0700	0811	3520	2743	0007847		14951							
	101	OBS	0760	0728	35151	2752			14928							
		SID	0800	0691	3514	2756	0005627	0997	14921							
		STD	0900	0614	3512	2765	0005808		14906							
	101	085	T0959	0577	35104	2769			14901							
		STO	1000	0564	3510	2770	0005383	1115	14903							
		STD	1100	0531	3509	2773	0005116		14906							
		STO	1200	0498	3508	2776	0004848		_							
	101	085	1203	0497	35083	2777			14909							
		STO	1300	0464	3505	2778	0004740	1265								
		STD	1400	0428	3501	2779	0004652		14913							
	101	OBS	1445	0412	34985	2778			14913							

	SHIP	LATITUE	1	TONGILADE F	MAR SQU	SDEN		SMT)		YEAR	CRUISE	STATIO	N	DEPTH TO	MAX DEPTH OF	OBSE	WAVE RVATION		CODE			NODO
+			1/10	1, 10	10.	3*			R,1/10		NO.	NUMBE	P	BOTTOM	S'MPL'S	DIF I	FGT PER	EA COD	E TYPE AN	1		MUMBE
	HM I	35016	5N	048002W	1113	58		- :		968		12		4426	44	09	2   3	×1	4 2			001
						COLOR	,		SPEED	BARO-	-	EMP. °C		NO. OBS.	SPEC							
						CDDE	Int	DIR.	FORCE	[mba]	BULB	BUL	B CODI	OBS. DEPTHS	DBSERV	A TION S						
_								18	511	213	233	206	5 8	21								
N	TIME o	CAST	CARD	DEFTH (m)	1	*c	5		SIGM	A-1	SPECIFIC VOI	LUME	≨ ∆ D	501	ONU	01/1	PO4-P	101AL-	NO2-N	NO3-N	5104-5	
Н	IR 1, 10	NO.	TYPE						31011		ANOMALT-	#10 <sup>2</sup>	x 103	. VELO	DCITY	O2 ml/l	up = 01/I	¥9 · 01/		νg - α1/I	μο - οl/	
			c 7.									+			ļ							
	099		OBS	0000 0000		108 108	363		255		00248	30 (	0000	15.								
	097		STI			097	363 363		255 255		00246	E 0 /	2025		266							
			ST			086	363		255		00245! 00242!		0025 0049	15.								
	099		085	0025		081	363		255		00242	44 (	0044		263							
			STI			007	363		257		00222	52 (	0072	15								
			ST			800	363		263		00172		0112	15								
	(199		OBS	0056		80 A	363		263		12.	1		15								
			ST			741	363		264		00160	73 (	1154	15								
	099		085	0075		741	363		264			- '	,	15								
	099		085	0099		722	363		265					15								
			STI	0100	1	721	363		265		001566	56 (	193									
			STI	0125	1	691	363	1	265		00152		1232	15								
			ST	0150	1	662	362	7	266		00149		270	15								
	099		085	0150	10	662	362	72	266	0				15								
			SI		10	605	361	8	266	6	001452	25 (	344	15								
	1190		OBS	T0200		505	361		266	6				15	154							
			ST			516	360		267		001390		415	150	132							
	0 - 0		ST			440	359		268		001335	57 (	)483	151	115							
	099		OBS	0300		440	358		268					15								
	0.00		STE			329	357		269		001246	52 0	0612	150								
	099		085	T0401		328	357		269					150								
	099		STO			173	355		270		001126	50 0	730	150								
	099		OBS STE	T0595 0600		126	353		272					150								
			5 T [			016 845	353 352		272 274		000988		836	150								
			STO			711	351		275		000816 000693		926	149								
	099		OBS	0800		711	351		275		000693	50 1	002	140								
	- , .		SI			524	351		276		000602	2.6. 1	067	149								
			STO			556	350		277		000535		124	149								
	099		085	T1000		556	350		277		-0000	1	. 1 2 4	146								
			STE			517	350		277		00508	16 1	176	149								
			SIC			+86	350		277		000485		226	149								
	099		085	1251	0.4	73	350		277			•		149								
			SIC			65	350		277		000475	3 1	274	149								
			STO			+50	350		277		000472		321	149								
	0.05		STE			136	350		278		00467	5 1	368	149	133							
	099		OBS	1500		+36	350		278					149	133							
			SIC			+02	350	_	278		000462		484	149								
	1/2		SIE			372	349		278		00457	,0 1	599	149								
	142		OBS	T2012		371	349		278:					149								
	142		STO			328	349		278		00445	1 1	825	150								
	142		OBS STO	2522		326	349		278		\0 D : = =	. 0		150								
	142		OBS	3000 T3032		288	349		278		000438	8 2	046	151								
	142		OBS	T3523		285	349		278					151								
	142		5TC			242	349		278		100,00	1 -	, 7,	151								
	142		OBS	T4033		225	348		2789		00422	1 2	476	152								
	142		0B S	T4293		223	348		278					152								
	+ 74		0BS	T4395		225	240	, ,	210	7				153	24							

ENCE					T-	MARS	OEN	OITATZ	N 1144			ORIGI	NAT	OR'S	DEPTH	MAY		WAVE		WEA-	CLO	un l			.000
ID.	COOE	LATITU	30	LONGITUDE	50	sou.		IG	MTI	YEA	R C	RUISE		TION	10	DEPTH	1 08	SERVATIO	115	THER	COL			ST	ATION
NO.	COOL	•	1/10	. ,1/10		10*	1*	MO OA	Y HR,1	/10		NO.		MBER	BOTTON	S'MPL	S DIR	HGT PER	5 E A	CODE	TYPE	AMT		N	UMBER
1304	нм	3501	6N C	47587W	1 1	13	57	27 02	110	0 196	8 6	E 13 0	13		4279	15	27		2	X1	8	1		0	0013
						[	WAT	ER	WIN	10	ARO:	AIR T	EMP.	. 2	NO.			1' '	*					,	
						Ī		TRANS.	OIR.	SPEED N	ETER	ORY	T	WET CODE	OBS. OEPTHS	OBCCBS	CIAL VATIONS								
							CODE	(m)		DICE	mbs1	RULB	1	IULE	ocrins	-									
								2	? <b>7</b>   S	15 2	227	217	2	206 8	14										
	MESSENGR	CAST	CARO				-		,		- 5	PECIFIC VOL	UME	₹ ∆ o byn. m	50	UNO		PO4-	р ,	OTAL-P	NO2-	N NO	1-N	SI 04-SI	
	TIME HR 1/10	약 NO.	TYPE	DEPTH	(m)	1	₹	5 .		SIGMA-	,   ,	ANOMALY-	1197	X 103	VEL	OCITY	O 2 m1/	µ0 − 0		μg = α1/I	ug - 0			μg • α1/I	ρH
	11 17 10			_	_						+							_	+		_		-		
		I	CTO		١	2.1	4.0	3622	. 1	25/2	-1,	00 25 4 6	7	10000	1 1 5	274		1	ı		l	ı	1	- 1	
	100	)	STC 085	000			140 140	3633 3633		2542 2542	,	00 2 5 6 9	# /	0000		274 274									
	100	,	SIE				21	3633		2547		002524	. 0	0025		271									
			STO				102	3633		2552		00252		0050		267									
	100	)	085	002			96	3633		2554	,	- 7 2 7 7		0000		266									
		-	STE				76	3633		2586	(	00216	12	0074		235									
	100	)	085	004			798	3633		2632			_			188									
			STO	005	0	1	782	3634	,	2636	(	00169	15	0112	15	184									
	100	)	085	006	9	1	737	3634	• 3	2647					15	174									
			STO	007	5	1	730	3634	•	2649	(	001576	57	0153	15	173									
	100	)	085	009	1	1.	713	3634	2	2653					15	170									
			STO	010	0	1	705	3633	3	2654	(	00153	71	0192	15	169									
			STO			16	82	3630	)	2657	(	001514	. 7	0230	15	166									
	100	)	085	014			666	3627		2659						164									
			STO	-		_	554	3626		2661	(	00148	86	0268		161									
	100	)	085	T019			501	3617		2666						151									
			STE				93	3616		2667		00144		0341		150									
	100		STO				26	3604		2673	1	00139	78	0412		136									
	100	,	085 ST0	028			+86 +65	3597 3594		2677 2679		001359		0481		128									
	100	1	OBS	, 030 1037			366	3579		2689	,	00135	,,	0481		123 103									
	100	,	SIC				332	3574		2692		001259		0611		094									
			STO				173	3552		2706		00113		0731		054									
	100	)	085	T057		_	)55	3538		2717			, ,	0131		023									
			STO				003	3534		2723	(	00098	) 4	0836		008									
			STO				333	3521		2741		00081		0926		960									
	100	)	085	077	1	0.	742	3515	55	2750						936									
			STO	080	0	0.	723	3516	,	2753	(	00069	71	1002		933									
			SIC	090	0	06	660	3517	7	2763	(	00061	11	1067	14	925									
	100	)	085	T096	7	06	522	3517	77	2768					14	921									
			SIC				04	3517		2770		00054		1125		920									
			STO				554	3514		2774		00050		1177		916									
			STO				09	3511		2777	-	00048	01	1227		914									
	100	)	085	121			501	3510		2777						914									
			STO				169	3507		2779		000466		1274		914									
			STO				•33	3502		2779	(	000464	+6	1321		915									
	100	)	085	T147	9	0.4	8 0	3498	31	2778					14	917									

ICE ID. IO.	SHIP	LATITUI	DE 1/10	LONGITUDE	DEUFT	MARSD SOUAR	I.E	10	ON TIA	Y	EAR	CRUISE NO.		TOR'S	1	DEPTH TO BOTTON	DEPTH OF S'MPL'	08		TIONS	WEA- THER CODE	CLOUD CODES		S'	NODC TATION UMBER
304	1414	3500	_	047599W	+ +						968	E13	014			4297	14		1	2	x1	8 4			0014
0 4	HM	35000	ON	04/599W	1 1-	113 [	WAT		_	ND II		1	AIR TEM		- I	Υ	14	29	ا کار	<b>2</b>	1 × 1	1 0 14	1	1	0014
						-	_			SPEED	BARO	)	DRY	WET	VIS.	NO.	SPE	CIAL	1						
							ODE	TRANS.	DIR.	FORCE	(mba		ULB	BULB	CODE	GEPTHS	OBSERV	ATIONS							
									22	504	264	4 2	22	217	7	14			1						
ſ									22	004	20	1 2	22	-	_	-	-		1						r —
	MESSENGE TIME	CAST	CAR		(m)	1 -	'C	5	٠/	SIGMA	1-1		C VOLUM	9	SA D	. 50	UNO	O2 m1/			TOTAL -P	NO2-N	N03-N	SI O4-Si	рМ
	HR 1/10		TYP	t											x 10 <sup>3</sup>	AFF	OCITY		28	• #1/1	ا/اه - وبر	µg - al/l	μg - σ1/l	μg - α1/I	
		T	-																						
'		' '	ST	D 000	0 '	21	78	363	3	253	1 '	002	6747		000	15	284		'					•	
	101	l	08.5		0	21	78	363	28	253	1						284								
			ST		0	216	66	363	2	253	3	002	6524	. (	027		282								
			ST			21:		363		254			5612		053		275								
	101	ι	08.5			210		363		254							270								
		-	ST			20		363	_	256		002	3450	) (	077		255								
	101	ı	08.5	-		18		363		260							214								
			ST			18		363		261		001	9306	. (	120		213								
	10	l	OBS	007	3	170	66	363	30	263	9					15	183								
			ST	D 007	5	170	63	363	3	264	0	001	6614	. (	165	15	182								
	10	l	08.5	009	7	17	32	363	53	264	9					15	177								
			ST		0	17		363		264		001	5801	(	205		177								
			ST			17		363		265		001	5517		245		176								
	10	l	OBS			16		363		265							174								
			ST	D 015	0	16	92	363	2	265	6	001	5313	. (	283	15	174								
	10	ı	OBS			16		362		266							164								
			ST			16		362		266	4	001	4772	. (	358	15	163								
			ST			15		361		267	1	001	4193		431		146								
	.10	ì	OBS	029	2	14	96	359	98	267	7					15	133								
	•		ST	rb 030	0	14	87	359	8	267	7	001	3731	(	501	15	131								
	10	1	OBS	7038	7	13	71	358	04	268	9					15	106								
			s T	D 040	0	13	43	357	6	269	1	001	2634	. (	632	15	098								
			ST	D 050	0	114	48	354	9	270	9	001	1085		751	15	045								
	10	1	OBS	1057	5	10	19	353	41	272	0					15	009								
			SI	D 060	0	0.9		353	1	272	5	000	9592	. (	854	14	998								
			s T	D 070	0	0.8	37	352	1	274	0	000	8186	, (	943	14	961								
	10	1	OBS	077	2	0.7	56	351	72	274	9					14	942								
			s T	080 QT	0	07	36	351	В	275	3	000	7007	' 1	019	14	939								
			ST	D 090	0	06		352	0	276	4	000	6001	. 1	084	14	929								
	10	l	OBS	T096	6	06	28	352	02	277	0					14	924								
			S T	ID 100	0	06		351		277	1	000	5348	]	141	14	922								
			s1			0.5		351		277		000	5023	} ]	193	14	916								
			s ī			0.5		351		277		000	4814	- 1	1242		914								
	10	l	OBS			0.5	06	351	04	277	7					14	914								
			S 1	D 130	0	04	73	350	7	277		000	4715	5 ]	1290	14	915								
			SI	fD 140	0	04	44	350	4	277	9	000	4647	1	1336	14	920								
	10	l	OBS	5 T145	0	04	32	350	26	277	9					14	923								
		-														- '									

																									/
REFEREN	CE	SHIP				_=	MARSD	EN	STATION TI	ME		0	RIGINA	TDR'S		DEPTH	MAX.		WAVE	WEA-	CLOUD			NDDC	
	D.	3008	LATITUD	- 1	ONGITUDE	200	SQUAL		(GMT)		EAR	CRUISE		ATION		TD MOTTOM	DEPTH		SERVATIONS	THER	CODES		\$	TATION	
LODE N	10.			1/10	'1/10	3	10*	1.	MD DAY H	R,1/10		NO.	N	A38WF		#0110m	S'MPL"	DIR	HGT PER 5	IA COUR	TYPE AM	1		UMBER	
3113	04	HM	35025	N C	47595W		113⊥	57	07 04 1	08 19	968	E13	015			4297	15	28	1 2	X1	8 6	1	- 1	0015	
								WAT		IND	BARC	)-	R TEM		- vis	NO.	SPE	CIAL							
							lc.	DLOR	TEANS DIR.	SPEED	METE (mbs			TIW	CODE	DBS, DEPTHS	DBSERV								
							F		00	500	_	$\rightarrow$	$\rightarrow$		7	1,									
	_								100	500	278	23	3	222	1	14					,				$\overline{}$
	"	ISSENGE TIME o	CAST NO.	CARD	DEPTH	mi	+ -	7	5 */	SIGMA	-т 1	SPECIFIC	VOLUM	(t   ₹	A. D.	sou		0 2 ml/l	PO4~P	TOTAL-P	NO2-N	и03−и	\$104-\$1		1
	н	1/10		11772								*****		,	103	. AFFC	JUIT		yg - ∉1/1	yg - e1/1	ا/10 - وبر	1/10 - وبر	µg - 01/1		c
	- 1						i				i			1							!		ĺ		
	•			STD	0000	)	22	26	3633	2517	7	0028	033	00	000	152	96								
		108		085	0000		22		36328	251						152									
				STO			21		3632	2525		0027			128										
				STD			21		3632	2539		0026	033	0 (	054	152									
		108		OBS	0024		21:		36317	2546		0022				152									
		108		STD OBS	0031		20		3632	2565 2609		0023	625	0.0	79										
		100		510			18		36321 3632	261		0019	288	0	122	152 152									
		108		085	007		17		36334	2636		001	300	0.	1 2 2	151									
		100		STD			17	_	3634	2631		0016	931	0.	168										
		108		085	009		174		36370	2648						151									
				STD	010	)	174		3637	2649		0015	888	0.	209										
				STO	012	5	17	12	3634	2653	3	0015	543	0.	248	151	176								
		108		085	014		16	B 2	36307	2658	3					151	170								
				STD			16		3630	2658		0015	162	02	286										
		108		OBS	019		160		36182	2666						151									
				STO			15		3617	266		0014			360										
		108		STD			15		3606	2671		0014	049	0.4	+32		-								
		108		OBS STD	0298		14	-	35959 3595	2678 2678		0013	(72	0.5	- 0 1	151									
				STD			134		3577	2691		0012			501 532	151 150									
		108		085	T0413		13		35749	2694		0012	601	0.6	332	150									
				STD			116		3553	2708		0011	147	0.	751	150									
		108		085	T059		100		35340	2722						150									
				STD	0600	)	09	91	3532	2724		0009	742	0.8	356										
				STO	0700	)	083	11	3518	2742	2	0007	994	0.9	944	149	951								
		108		OBS	0793	3	069	95	35108	2753	3					149	921								
				STO			069		3511	2754		0006			19	149	921								
				510			069		3517	2764		0005	957	10	83										
		108		obs	T0994		06:		35191	2771						149									
				SID			06		3519	2771		0005		_	139	_									
				STD			05		3513	2770		0005		-	194	149									
		108		STD OBS	1200 1249		054		3508 35061	2 <b>7</b> 71		0005	4 / 9	1 2	249										
		100		STD			050		3504	2773		0005	312	1.5	303	149									
				STD			049		3501	2775		0005			354	149									
		108		OBS	T1494		04		34989	2779		500	527	1.	<i>-</i>	149									
									2		-					1-9-3									

0	č		3 3	Y 1		CIAL ATOAS	NO. 595	₹	t per	5452 PE.	TEN E PE	* A	\$005 <b>%</b>	*N 04	₩ <b>0</b> 3502
							12	1		576 29					
	35 - 25 2: 0*=2:	ND3-N		*C*A4=*	15 1 E.	3; <del>e</del> .1	\$0_%0 VELOCITY	2 12 E	SHIFE VOLUME ENDMAINET	22MY-4	2	- =	District	CARC	######################################
							15309	0000	0028661	2511	3642	2273	2002	STO	
							15309			2511	36418	2273	2202	25.5	100
							15288	2027	0026326	2536	3641	2183	2212	572	
							15268	3053	3024302	2557	3640	2102	5525	STD	
							15259			2566	36387	2065	2025	088	
							15252	0076	0022803	2573	3637	2034	2230	572	• • •
							15222	0330	002022	2501	3633	1917	0050	S 7 2	
							15222		002022	2501	36331	1917	2050	25.5	
							15189	1166	0017917	2633	3632	1785	0075	STO	
							15189	00	3.	2633	36316	1788	0075		100
							15181	0208	0016249	2545	3633	1743	2120	385	- 4 6
							15181	0202		2645	36330	1743	2100	STO	
							15182	0249	0016188	2647	3634	1734	2125	08.5 ST0	100
							15179	0288	0015604	2653	3634	1711	2152	STO	
							15179	1200	001-504	2653 2653					
								000	001.446		36340	1711	0150	088	100
							15160	0364	0014665	2665	3622	1624	0200	STO	
							15159			2665	36213	1621	10202	085	111
							15146	0436	0014215	2671	3610	1557	1250	\$70	
							15132	0506	0013743	2677	3599	1491	0300	STD	
							15132			2677	35983	1490	2301	0B.S	100
							15105			2680	35783	1363	70398	0B S	100
							15104	2639	0012812	2689	3578	1359	3400	SID	
							15055	0.760	0011370	2706	3552	1175	0.5.0.0	STD	
							15009	2856	0009966	2721	3533	1006	0600	570	
							15009			2721	35325	1006	<b>7</b> 0600	08.5	100
							14963	2957	0008067	2742	3524	1841	0700	STO	
							14930	1032	0006924	2753	3515	3714	2 6 2 3	5 70	
							14929			275-	35144	2712	0.802	08.5	100
							14911	1095	0005846	2765	3514	1525	2900	STO	
							14908	1151	0005313	2771	3513	0,575	1700	510	
							14908			2771	35131	0.574	71004	09.5	100

	SHIP LATTU	©€ LG 1/15	+9*LDE	VARSCEN SCLARE	STATISMET SWEET		09.9 NA10 09.08 07A NO NO	5.5	ograda ordwydi	3	PAVE EFVACTING ASTREE			N. S. S. S. S. S. S. S. S. S. S. S. S. S.
1304	HM 3502	0% 04	8008#			191 1968	E13 117		-22- 16	1.5		1 11	9 3	:::=
				^^		FRED BAT	C- AP TEMP		NO111	EC 4.				
				00.01 00.01	TEATS OR	1515 ME1 51 52 T	12P	187 - 1518 118	offic and	- ATSN:				
						511 28	6 239 2		Ţ.,					
Ī	₩E 558HGF , C.A.S* ™E 07 NO. ~R 1/10	CARD	51F*+ =		5 *	\$ 5 M A = 1	IMOSO VOLUME ANOMALIAS	\$ ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	\$50,NS +500074	t:-	20	1514*	NO3- NO	-1-14-5
		STD	0000	2258	3697	2511	0028605	7000	15315					
	101	OBS.	0,000	2258	36360	2511			15975					
		S T D	0110	2178	3547	2536	0026263		19286					
		SID	0020	2111	3642	2556	1714992	7 7 5 3	15271					
	101	085	0027	2071	36425	5=40			15242					
		SID	0030	2165	3543	2569	1033186	2577	15261					
		STD	2050	1990	3642	2580	0021422	7131	152-3					
	101	088	00 f Z	1091	36416	2591			15041					
		STD	5675	1897	3633	2622	0017665	- 17:	15195					
	101	OBS	00.79	1787	36324	2636			15190					
		\$70	5100	1745	3635	2645	0216149	1212	15191					
	101	08.5	0105	1737	36357	2649			18181					
		STO	0125	1726	3535	26 = 1	0015815	1393	15190					
		STO	0150	1706	3633	2654	1018833	1291	16178					
	101	oBs	2158	1698	36330	2654			1					
		STD	5205	1645	3625	2662	0014919	1355	15167					
	101	085	T0212	1630	36220	2563			15164					
	101	STO	0250	1582	3613	2669	0014546	^	1515-					
		STS	0300	1515	3602	267-	2014141	1819	151-7					
	101				35972									
	101	085	0319	1488		2676			15134					
	101	STD	0400	1367	3578	2688	0012975	0548	15176					
	101	OBS	T0424	1329	35729	2692			15097					
		SID	0500	1194	3552	2702	2211729	-	18761					
		STD	0600	1023	3593	2719	5111227	1881	15015					
	101	OBS	T1631	0971	35291	2725			15,01					
		5 7 0	2700	0 8 4 5	3527	2-4-	0007675	0000	1-9-5					
	101	085	9790	773 5	35257	2761			1-931					
		510	0 8 0 C	2713	3525	2762	00151-5	11-2	14931					
		SID	0900	0660	3522	2767	200 <b>573</b> 6	11-1	1-925					
		STD	1006	0609	3519	2771	0005362	1157	1-921					
	101	085	T1056	0581	35170	2773			14930					
		STD	1100	0.555	3514	2774	0005097	121=	1-916					
		STD	1200	0.803	3508	2776	0004938	1259	14911					
		STD	1300	0451	3504	2777	0004773	1318	1-915					
	101	OBS	1327	0.452	35032	2778			1-911					
		STD	1450	0431	3501	2778	0014692	1355	1-91-					
		STD	1500	0411	3499	2779	1014467	1-02	14922					
	101	085	T1590	0412	34988	2790		2	1-933					

REFERENCE SH		DE LO	NGITUDE 100	MARSO	EN RE	STATION T		YEAR	CRUISE	ORIGIN	ATOR'S		DEPT	Utr	TH O	W.	A VE VA TIONS	WEA- THER	CLOUD			NOOC STATION
CODE NO. COL	DE .	1/10	1/10		1*	MO DAY	tR.1/10		NO.		UMBER		80110	M S'MP	L'S DIE	THE	T PER SE	COOE	TYPE A M	7	1	NUMBER
T	. 25.02	-						1040	F12		n			1 1	5 12	,		X1	8 6	1		0018
1 311304l Hr	1 3502	IN 1 UZ	8001W	1113	5 8 WAT		100	1968		O 1		T-1	436	1 1	) 14	٦'	1 1 1	1 X I	1 0 0	,		0016
				-			SPEED	BARI METI	J+  -	ORY	WET	VIS.	NO.		PECIAL RVATION							
				10	ODE.	Imt DIR.	FORC	1		BULB	BULB	100	DEPTH	IS DESE	KVAIIUN	,						
						13	512		B 2	39	217	7	14									
			1	_		1 2	1312						•		ī				Γ			T -
MESS	ENGR CAST	CARO	DEPTH (m)	T	"C	s */	SIG	MA-T	SPECIFI	C VOLU	ME 0	γA. 0	. 5	LOCITY	02 m	171	PO4-P 1/10 - 94	101AL-P	NO3-N +9 - at/1	NO3=N pg - a1/1	SIDa!	
HR	1/10	1176				1						x 103		LOCINI	-		pg - 4.71	pg - 0.77	pg - 3071	µg = q1/1	pg - di.	-
															i							
·		SID	0000	23	59	3652	24	93	003	034	3 0	000	1	5332								
	00	085	0000	23	59	36515	24	93					1	5332								
		STD	0010	22	41	3644	25	21	002	766	9 0	029	1	5303								
		SID	0020	21	37	3639	25	47	002	529	0 0	055	1	5277								
	00	OBS	0026	20		36372	25							5264								
		STD	0030	20		3639		70		309		080		5256								
		STD	0050	19		3642		09	001	948	4 0	122	_	5222								
	100	085	0051	19		36424	26							5221								
		SID	0075	17		3639		40	001	661	0 0	167		5189								
	100	085	0077	17		36391		42						5187								
		SID	0100	17		3638		48	001	590	8 0	208		5182								
	100	OBS	0102	17	_	36379		49		_				5181								
		STD	0125	17		3636		52		567		247	_	5179								
		STD	0150	17		3634		55	001	546	6 0	286		5178								
	100	OBS	0153		03	36334		55						5178								
		STD	0200	16		3629		59	001	521	/ 0	363		5175								
	100	085	10205	16		36287		60	001	. 7.				5175								
		STD	0250		18	3621		65		476		438		5166								
	100	STD OBS	0300 0307	15 15		3610 36082		72	001	424	0 0	511		5153 5150								
	100	STO	0400		41 79	3579		86	001	314	7 0	648		5110								
	100	085	T0410		62	35762		87	001	. 314	, 0	040		5106								
	100	SID	0500		23	3557		01	001	191	0 0	773		5072								
		STD	0600	10		3540		17		046		885		5031								
	100	OBS	T0611		47	35388		19	001		. 0	002		5026								
	100	510	0700		75	3529		40	000	821	5 0	978		4976								
		STD	0800		32	3521		56		672		053		4937								
	100	085	0809		22	35206		57	000	.0.2	0 1	د د د		4935								
	.00	STD	0900		69	3520		64	0.00	600	8 1	117	_	4929								
		STD	1000		14	3520		71		539		174		4924								
	100	OBS	T1007		10	35195		71						4924								
		STD	1100		61	3516		75	000	503	4 1	226		4919								
		STD	1200		15	3512		77		481		275		4916								
	100	08.5	1271		85	35091		79						4916								
		STD	1300		74	3508	27	79	000	465	5 1	322		4916								
		STD	1400	04	38	3504	27	80		456		368	1	4917								
		SID	1500	04	09	3500	27	80	000	456	7 1	414	1	4921								
	100	085	T1539	03	99	34981	27	79					1	4924								

ERENCE	SHIP	LATITU	CI.	LONGIT		MAR	SDEN	STATION	TIME	V.	AR		SINA			DEPTH	MAX. DEPTH	C	WAV	E DONS	WEA-	CLOUG			NODE
10. NO.	CODE	LATITU	1/10	LONGII	1/10		- 1	MO DAY		1	^*	NO.	STA	MAER		BOTTOM	OF S'MPL'S	1		ER SEA	0000		1		NUMBER
1304	нм	3502	2N	0475	87W	113	57	07 08	100	19	86	E13 (	19			4297	42	15		2	×1	8 2			0019
							WA	TER	WINO		BARO-	AIR	TEMP		VIS	NO.	SPE	CIAL	ľ	·					_
							COLOR	TRANS. DIR	. 1 0	10	METER (mbs)	ORY BUL		W ET	C006	OBS. DEPTHS	OBSERV	ATIONS							
							-	17	$\overline{}$	ICE .	278	-+			7	21									
1		1						11 /	130					222	_		L		4				,		т
	MESSENGE TIME C	CAST	CARC		DEPTH (m)	1	₩	s ./	,	IGMA		SPECIFIC VI		- Sy	A. D.	SOI	DCITY	O2 ml/			TOTAL-P		NO3-N	\$104-5	рн
	HR 1/10		1176					1			_			×	103	VEL	Jeni		29	- 01/1	## · 01/1	#g - a1/1	μg - α1/I	µg - α1/	1
		-																							
			ST		0000		382	3655		488		00307	74	0.0	00		337								
	100		OBS		0000	_	382	36545	_	488							337								
			ST		0010		230	3648		528		00270			29		301								
	100		S T		0020		108	3643		558		00242	41	0.0	55		270								
	100		OBS		0025		059	36416		570		00225	2.1	0.0	78		258								
			ST ST	-	0050		036 930	3642 3642		576 604		00199			20		253 227								
	100		OBS		0050		930	36418		604		00175	11	01	20		221 227								
	100		ST		0075		769	3636		640		00165	80	0.1	66		184								
	100		085	_	0075	_	769	36356		640		10,		01	- u	_	184								
	100		OBS		0099		740	36349		647							180								
			ST		0100		740	3635		647		00160	33	0.2	07		180								
			ST		0125		738	3637		649		00159			47		184								
	100		OBS		0149	1	729	36378	2	652						15	185								
			ST	٥	0150	1	728	3638	2	652		00157	28	0.2	86	15	185								
	100		OBS	T	0199	1	692	36334	2	657	,						182								
			ST		0200	1	691	3633		657		00153	184	0.3	64	15	182								
			ST		0250		629	3621		663		00150	11	0.4	40		170								
	100		OBS		0299		557	36088		670							154								
			ST		0300		555	3609		670		00144	36	0.5	14		154								
	100		OBS		0397		380	35813		687		001-0			٠.		110								
			ST		0400		375	3580		688		00129			51		109								
	100		ST OBS		0500 0589		198 049	3555 35371		704		00115	87	0 /	74		063								
	100		ST		0600		028	3535		720		00101	۷.	0.0	183		023 017								
			ST	_	0700		858	3522	_	738		00084			176		969								
	100		OBS		0786		747	35160		750		0000		0,	,,0	_	940								
	100		ST		0800		737	3516		751		00071	61	1.0	154		939								
			ST		0900		669	3517		762		00062			21		929								
	100		OBS		0984		615	35181		770					~ -		922								
	-		ST		1000		603	3517		770		00054	23	11	79		919								
			ST		1100	0	538	3511	2	774		00050	80	12	31	14	909								
			ST		1200		486	3506		776		00048	54	12	81		904								
	100		OBS		1232		473	35045		776							904								
			SŤ		1300		456	3503		777		00041			129		908								
			ST		1400		434	3501		778		00047	32	13	77	-	915								
	100		OBS		1477		419	34997		779		000/	0.6		٦,		922								
			ST		1500		417 393	3500		779		00046			24		925								
	144		ST OBS		1750 1999		393 369	3499 34991		781 783		00046	20	15	40	_	957								
	144		SI		2000		369	34991		783		00045	10	1.4	55		989 989								
			ST	_	2500		323	3496		785		0004			179		969 055								
	144		OBS		2504		323	34961		785			.00	10	, , ,		055								
			ST		3000		279	3494		788		00042	77	20	98		122								
	144		OBS		3008		278	34936		788				20	. , 0		123								
	144		OBS		3501		253	34917		788							198								
			ST		4000		226	3490		789		00042	19	25	22		273								
	144		OBS		4016		225	34897		789					_		276								
	144		OBS		4249		224	34892		789							317								

FERENCE IV ID.	SHIP	LATITU	DE 1/10	LONG	17UDE	DEBF	MARS SOU	ARE		TION IGMT	TIME HR,1/10	YEAR	• 6	RUISE NO.		TION MBER		DEP TO BOTI	0	MAX DEPTH OF "MPL"S	Į.		VE A TIONS	WEA- THER COOE	CODES			NOOC STATION NUMBER
+	1					1 1		1						520 6	20								-	X1	8 3			0020
11304	н нм	3502	4N I	048	008W	1 1	113	58 WA			100	196			1EMP	٣		433 NO	-	14		2	13 1	1 71	013	ŀ	+	0020
								COLOR	TRAN	+	SPEE	D M	ETER	DRY		WET	COD	OB		\$ <b>9E</b> 0 V93280	ATIONS							
								COOE	im)	21	510		70	250	-+-	28	8	14	_		-							
	MESSENG	CAST NO.	CAR		DEPTH	(m)	,	°c	1	٠/٠.	1	MA-1	.	SPECIFIC V	OLUME	ž Di	Δ Q (N, M	T	SOUN		O 2 ml/l		PO 4~P	101A L=P ug - o1/4	NO2-N ug - at/l	NO3-N ug - at/l	51 O4-	
	HR 1/10	-					-				+	-	+			+	103					+	-		-	-	-	+
	1		51	. n	000	0	1 2	377	36	54	24	89	- }	00307	705	1	000	1	153	36		ĺ	- 1				!	ţ
	10	0	OB S		000		_	377		535		89		, .				-	153									
	10	0	51		001		_	346	36		_	98		00299	911	0.0	030		153	-								
			51		001		_	286	36		_	14		00284			359		153									
	10	0	085		002		_	262		507		20							153									
		~	51		003			165	36			46		00254	19	0.0	186		152									
	10	0	083		004			964	_	410		95							152									
	10	~	51		005			947		40		9		00204	469	0	132		152									
	10	0	OBS	_	007		_	813		347		29							151									
	• •		51		007		_	805		35		31		00174	494	0	180		151									
	10	0	OBS		009	4	ī	771		349		39						]	151	88								
			51	D	010	0	1	764	36	35	26	641		00165	593	0.	222	1	151	87								
			51		012	5	ī	739	36	35	26	47		00160	95	0.	263	. 1	151	84								
	10	0	OBS	5	014	2	1	724	36	351	26	551						1	151	82								
			51	D	015	0	1	721	36	35	26	552		00157	762	0	303	. 1	151	83								
	10	0	085	5	T018	9	1	695	36	339	26	557						1	151	81								
			51	D	020	0	1	682	36	31	26	558		00153	323	0	381	1	151	79								
			51	D	025	0	1	617	36	19	26	64		00148	888	0	456	. ]	151	66								
	10	0	OBS	5	028	1	1	570	36	111	26	669						3	151	55								
			51	Q.	030	0	1	536	36	05	26	572		00142	276	0	529	1	151	47								
	10	0	085	5	T036	9	1	413	35	854	26	84						3	151	17								
			51	D	040	0	1	360	35	77	26	88		00129	905	0.	665	1	151	04								
			S 1	D	050	0	1	191	35	54	2	704		00115	527	0.	787	1	150	60								
	10	0	083	5	T055	1	1	106	35	440	2	713						1	150	38								
			51	Ω	060	0	1	012	35	36	2	723		00098	315	0.0	894	. ]	150	11								
			51	D	070	0	0	855	35	24	2	740		00082	256	0	984	. 1	149	68								
	10	0	OBS	5	073	5	0	811	35	215	2.	745						1	149	57								
			51	D	080	0	0	763	35	22	2.	752		0007	105	1	061	1	149	50								
			51	D	090	0	0	691	35	24	2	764		00060	185	1	127	1	149	38								
	10	0	OBS	5	T092	2	0	675		238		766							149									
			51		100			613		18		770		00054		-	185		149									
			5	D	110	0	0	547		12	_	774		0005	132	1.	238	]	149	13								
	10	0	OB 9	5	116			515		094		775							149									
			51		120		0	498		08	_	776		00048		1.	288		149									
			S	D	130	0	0	465	35	05	2	778		0004	753	1	336	1	149	12								
	10	0	083	5	139	4	0	449	35	035	2	778							149	21								

CTAY ID.	SHIP	LATITUDE		ONGITUDE	DC T#	MARSOE	4	TATION	TIME			ORI	SINA	O#'S	П	DEFTH	MAX			WAVE		Tw	EA-	CLO	un				$\neg$
CODE NO.	CODE		/10	1/10	Z Ž	10°   1		IGM	HR.1/10	YEA	8	NO.		TION		TO BOTTOM	DEPTH	L		ERVAT		TH	ER DE	COI	DE5			STATIO	N
311304	нм	35038	N O	48001W		113 5	-	1		100		_		- BCK	-		5'MPL			HGT P		^	-	TYPE	AMT			NUMB	ER
		55050	, , ,	40001#	1 1		8 0 WATER	110	100	196			1EMP	4		4224	14	1	22		1 2	2   y	1	8	6			002	1
						CO		NE DIS	SPEE		ARO+ ETER	ORY	_	WET	VIS	NO. 085.	S P E	CIAL											
						CO	DE	m)	FORC	E (	mbal	BULE		BULB		DEFTHS	Ousek	- 110	,,,										
								21	512	2	71	239	1:	222	7	14													
	MESSENGR	CAST	CARD	DEPTH (	mı I	1 °C	-	5 %.	Sin	MA-T	5	PECIFIC VO	LUME	₹	Δp	soul	ND			PO	P	TOTAL		NO <sub>2</sub> -				. T	
	HR 1/10	110.	TYPE						_   "			ANOMALI	-1107		N, M. 10 <sup>3</sup>	VELO	CITY	0 2	ml/l	vg -		h8 - 0		µg - al		NO3-N vg - at/l	51 D <sub>4</sub> =3		Н
		1																		$\vdash$		_	+		+		-	+-	
			STO	0000		237	2 3	651	24	89	. (	00307	44	0.0	0.0	153	35			1	1		1		1		1	1	
	100	(	DBS	0000		2372	2 3	6510	24	89				-		153													
			SID	0010		2346		651	24	96	(	00301	03	0.0	30	153													
	100		STO	0020		232		650		03	(	00294	66		60	153													
	100	(	DBS	0025		2308	_	6498	25	07						153	23												
	100	_	STO	0030		2236		647	25		(	00273	96	0.0	89	153	05												
	100	(	)BS	0049		2023		6402								152	52												
			510	0050		2017		640	25			00222		0.1	38	152	51												
	100	_	STD BS	00 <b>75</b>		1886	_	637	26		(	00192	68	01	90	152	18												
	100		510	0100		1886		6371	26							152													
	100	^	85	0100		1772		635	26		(	00168	16	0.2	35	151													
			STD	0125		1750	-	6345 636	26							151													
	100	0	BS	0149		1733	_	036 6362	26		(	0162	78	02	77	1518													
		·	STD	0150		1733		636 636	26 26		0	0159	4 ۵	0.2		1518													
	100	0	BS.	T0199		1710		6355	26		C	0159	00	03	1 /	1518													
			STD	0200		1709	_	635	26		0	0156	5.2	03	0.4	1518 1518													
			STD	0250		1656	_	526	26			0152		04		1517													
	100	0	B 5	0295		1593		5148	26				- 0	0 4	, ,	1516													
			SID	0300		1584	3	513	266		0	0147	4.8	0.5	4.8	1516													
	100		B 5	T0390		1414	3	5856	261	9.4				-		1512													
			5T0	0400		1389	3	82	268	36	0	0131	35	06	88	1511													
	100		SID	0500		1161	_	550	270	7	0	0112	4	0.8	10	1504													
	100		BS	T0580		1007	_	314	272							1500	06												
			STD	0600		0973		28	272			0097		09	15	1499	96												
	100		510 B5	0700 0767		0826		16	273		0	0083	78	10	05	1495	6												
	100		5T0	0800		0745		118	274		_					1493	36												
			STO	0900		0636		12	275			00713		10		1493													
	100		B.S.	0950		0601		13	276		U	00604	19	114	48	1491													
			STp	1000		0572		132	276		_	00555				1491													
			STD	1100		0521		09	277			00535		120		1490													
	100		85	1176		0490		072	277		Ü	00499	14	125	7	1490													
			STO	1200		0481		07	277		0	00471		120		1490													
			STD	1300		0452		04	277			0047]		130		1490													
			STD	1400		0432		01	277			00465		139		1490													
	100		BS	T1401		0432		008	277		01	0 0 4 1 (	,	133	, 7	1491	4												

CE 0. 0.	SHIP CODE	LATITUO	DE L	ONGITUOE	Z SQL	SOEN JARE		ION TIA	' '	'E A R	CRUISE NO.	RIGINAT STA NU	OR'S TION MBER	$\exists$	OEPTH TO BOTTOM	MAX. OEPTH OF S'MPL"	1 08	WAVE ERVATIONS		R C	LOUD		51	IODC ATION UMBER	
		25.00				1				0/0	530	000		1	. 2 70	1	1			_	_			2022	
04	HM .	35006	SN I U	47596W	1113	57			00 1	9 <u>68</u>	E13	022 IR TEMP	*C	ď	4279	15		11 13 1	Y 1	. 1 4	2   3	I	1 '	00221	
						COLOR		-	SPEED	BARC	)• <del> </del>	r		VIŽ	NO. 085.		ECIAL VATIONS								
						COOL	im1	DIR.	FORCE	(mba			BULB	0000	DEPTHS	OBSER	12 110143								
								26	506	268	3 23	13 2	211	7	13										
ſ	MESSENGR			T			1	100					_	^ ^	T			T	1	1	. 1				T.
1	TIME (	CAST	CARO	OEPTH (m	. 1	*C	5	•/	SIGM	4 - T	SPECIFIC		ο̈ν	Δ Q.		JNO	02 ml/l	PO4-P	10TAL-		02-N - 01/I	NO3-N ug - 01/1	\$1 04-51 yg - at/1	ρĦ	ć
,	HR 1/10	-	_				-		-				, x	103	+			1		1.			7.		#1
					-															1					
			STD	0000		445	364		246		0033	013	0.0	00	153										
	100		OBS	0000		445	_	483	246						153										
			SID			358	364		249		0030			32	15:										
			STD			275	364	-	251		0028	3491	0.0	61	15:										
	100		OBS	0025		235	364		252						15										
			SID			199	364		253		0026			89	157										
			SID			049	364		257		0022	828	01	38	15										
	100		OBS	0051	_	041		425	257							257									
			STD	0075		847	36:		262		0018	3447	01	90		207									
	100		OBS	0076		841		351	262							205									
			STO			769	361		264		0016	586	0.2	34	15										
	100		OBS	0101		766		368	264		0016					188									
			STO			757	36		264	-	0016			75		189									
			STD	0150 0200		741 687	36: 36:		264		0016			95	15	180									
	100		OBS	T0204		681		320 320	265		0015	350	0.5	75		179									
	100		STD			577	36		267		0014	000	0.4	68	15										
			STD	0300	_	487	360	_	268		0013			36	15										
	100	)	OBS	0305		479		048	268		0012	1147	0 2	0 0		130									
			STD	0400		383	358		268		0013	084	0.6	67	15										
	100		OBS	10404	-	378		804	268						15										
			STO			202	35		270		0011	663	0.7	91	150										
			STD			037	35:		272		0010			0.0	150										
	100	)	OBS	T0607	1	026	35	355	272	0						017									
			STD	0700	0	885	35	28	273	8	0008	3452	0.9	93	149	980									
			STD	0800	0	763	35	23	275	3	0007	7054	10	71	14	950									
	100	)	OBS	0812	0	750	35	222	275	4					14	947									
			STD		0	684	35		276	3	0006		11	37	14	935									
			STD			617	35	_	277		0005	404	11	94		925									
	100	)	OBS	T1024		602		192	277							923									
			STD	1100		559	35		277		0005			47	149										
			STO	-		508	35		277		0004	860	12	96		913									
	100	)	OBS	1269		478		069	277		000:					912									
			STO	_		466	350		277		0004		_	44	149										
			STD			431	350		277		0004	-		91		914									
	100	,	STD	1500		404 399	349		277		0004	104/	14	37	149										
	100	,	OBS	T1522	U	クササ	941	975	211	7					149	721									

SHIF		TITUOE	LO	NGITUDE E	E MAS	SOEN	STATIO	ON TIM		AR		ORIGIN		I	DEPTH	MAX		WAVE	-	WEA	. CLO				NODC	
COD	E .	1/10		1/10	3 10			AY HR.		~ .	CRUISE NO.		TATION UMBER	-	TO BOTTON	0.0	1 00	SERVATI		COOE					STATION NUMBER	٧l
4 HM	35	012N	04	7598W	113		07 1	2 10	00 19	68	E13	023	3	4	+371	15	27	1 2		x 1	8				002	2
						WA	_	Wil	4-1	BARO	-	AIR TEA		vis	NO.	5.98	ECIAL	]				- '		'	002.	ار
						COLOR	TRANS, Imt	DIR.	FOICE	(mba)		ULB	BULB C	ODE	OBS. DEPTHS	OBSER	VATIONS									
r				r			Ļ!:	24 5	808	257	2	39	222		14	Ĺ.,								_		
MESSE	HOR CA			DEPTH (m)	1	70	5 .	4.	SIGMA	-1	SPECIFIC	VOLUA	SYN	. M.		DND	0 2 ml/	PO4		DTA L-P	NO2-	N N	103-N	5104-5	ρН	
HR 1/	/10	-			-		-						X	03	VELO	DCITY		h8 -	01/1	g - a1/1	h8 - 0	1/1 p	g - at/l	9g - a1/	1 "	_
1	ı	51	ם '	0000	2	457	3646	ا 5	2460	-	003	3509	000	10	16	355 355			-			1	1			
1 (	00	OBS	;	0000		457	3646		2460		005	550,	000	, ,		355										
		ST	D	0010	2	372	3646	_	2485		003	1116	003	3.2	15											
		ST		0020		281	364		2512		0028		006			315										
10	00	OBS		0025	2	233	3646	57	2526					_		304										
		ST		0030		172	3645		2542		002	5792	008	9	152											
_		5.1	_	0050	_	969	3640		2593		0020	0996	013	6	152	237										
10	00	OBS		0051		960	3640		2595						152	235										
	0.0	ST		0075		802	3636		2632		001	7365	018	4	15	194										
1 (	00	OBS		0076		798	3635		2633						151	193										
1.0	0.0	ST		0100		748	3634		2645		0016	5270	022	6	151	182										
1 (	00	OBS		0101		746	3634		2645						151											
		ST ST		0125		737	3636		2648		0015		026		151											
10	0.0	085		0150 0152		724 723	3637		2653		0015	265 /	030	6	151											
	, ,	ST		0200		586	3633		2653 2659		0015		0.00		151											
10	00	OBS		0203		583	3632		2659 2659		0015	2263	0.38	3	151											
- '		5.7		0250		508	3618	-	2665		0014	. 760	0.45	0	151											
		ST		0300		528	3604		2673		0014		045		151 151											
10	0.0	OBS		0305		520	3602		2674		0014	*1 ()	073	1	151											
		ST		0400		366	3579		2689		0012	2882	066	4	151	-										
10	00	OBS		T0408		353	3577		2690		0012	.002	000	O	151											
		ST	D	0500		201	3554		2702		0011	717	078	Q	150											
		ST	D	0600		043	3535		2717		0010		090		150											
10	0 (	OBS		T0609	10	29	3533		2719			, , , , ,	0,0		150											
		ST	D	0700	0.8	374	3524		2737		0008	3564	099	5	149											
		ST	D	0800	0.7	741	3517		2751	-	0007	7156	107		149											
10	00	OBS		0812	0	728	3516	0 :	2753				• • •	_	149											
		ST		0900		664	3516	. :	2761	(	0006	235	114	0	149											
		S.7	D	1000		00	3516		2770		0005		119		149											
10	00	OBS		T1019		89	3515		2771						149											
		ST		1100		46	3512		2774	- (	0005	118	125	2	149	12										
		ST	D	1200		99	3508		2776	- (	0004	884	130	2	149	09										
10	0	OBS	_	1269		+72	3505		2 <b>7</b> 77						149	09										
		ST		1300		61	3504		2 <b>77</b> 7		0004		135	0	149	10										
		ST	-	1400		31	3501		2778		0004		139	7	149	14										
		STI	D	1500		09	3499		2779	(	0004	640	144	4	149	21										
10	U	085		T1516	04	06	3498	4 :	2779						149	23										

Table VIII.—Observed and interpolated oceanographic data for stations taken by USCGC CASTLE ROCK at Ocean Station ECHO, 14 July-4 August 1968, prepared from NODC listing No. 31-1303

REFERENCE SHIP	TITUDE LO	MOITUDE BOUTION	MARSOEN	STATION TO	IME YEAR	ORIGINAT		DEPTH	MAX. DEPTH		WAVE ERVATIONS	WEA-	CLOUG		NC	OC TION
CODE NO. CODE	1/10	1/10	10. 1.	MO DAY H			MBER	воттом	OF S'MPL'S		HGT PER SEA	10000				MBER
311303 CK 35	14 N 04	757 W D	113 57	07 14 1	174 1968	E14 001		2926	16	29	2	X 8	6 6		00	001
			WA	TER V	VIND	D- AIR TEME	VIS.	NO.	SPEC	CIAL						
			COLOR	TRANS. OIR.	SPEED METI OR (mbi		WET COO		OBSERV							
				28	517 15	6 228	217 7	14								
WESSENGE C	ST CARD	DEPTH (m)	1 70	s */.	SIGMA-T	SPECIFIC VOLUM	₹ ∆ 0		JND	O2 mi/i	PO4-P	TOTAL-P	NO2~N	NO3-N	SI O4-SI	
TIME 07 N	O. TYPE	DEFIN (m)	, ,	,	31GMA=1	ANOMALY-XIG7	x 10 <sup>3</sup>	, AEFC	DCITY	U2 mi/i	µg - α1/1	μ <b>g -</b> m1/l	νη • αl/l	μg - e1/l	μg - σ1/l	рΗ
								1								
17/	STD	0000	2374	3641	2480	00 31 55 7	0000									
174	OBS	0000	2374	36405	2480	000000	0000	153								
	STD	0010	2291 2202	3639	2503 2529	0029396 0027017	0030									
176	STD OBS	0020 0027	2136	3639 36386	2529 2547	0021011	0059		294 278							
174	STD	0027	2097	3639	2558	0024303	0084									
	STD	0050	1891	3640	2613	0019119	0128									
174	085	0053	1869	36397	2619	0019119	0126		210							
114	STO	0075	1781	3639	2640	0016586	0172									
174	OBS	0080	1769	36393	2643	0010300	01/2		186							
174	STD	0100	1753	3639	2647	0016045	0213		184							
174	085	0106	1750	36386	2647	0010049	0213		184							
1 ( 4	STD	0125	1748	3639	2648	0015983	0253		187							
	STD	0150	1745	3641	2650	0015915	0293		190							
174	OBS	0160	1744	36410	2651		0293		192							
• ( •	570	0200	1715	3637	2655	0015646	0372									
174	OBS	70213	1704	36351	2656				188							
• / •	STD	0250	1670	3629	2659	0015359	0450		183							
	STD	0300	1616	3620	2665	0014953	0525		174							
174	OBS	0322	1589	36150	2667				169							
- / ·	STD	0400	1475	3595	2678	0013992	0670		143							
174	OBS	70433	1423	35868	2683	· <del>-</del>			131							
• / -	STD	0500	1289	3567	2695	0012480	0802		095							
	S70	0600	1105	3543	2712	0010968	0920		045							
174	OBS	0650	1020	35344	2720				022							
= / •	STD	0700	0935	3530	2732	0009140	1020		999							
	570	0800	0790	3522	2748	0007548	1104		960							
174	OBS	T0862	0716	35176	2756				941							
	STD	0900	0683	3516	2759	0006516	1174		934							
	STO	1000	0605	3513	2767	0005745	1235	149	920							
174	OBS	1090	0549	35099	2772			149	912							
	STD	1100	0545	3510	2772	0005273	1290	149	912							
	STD	1200	0509	3508	2775	0005035	1342	149	913							
	STD	1300	0477	3506	2777	0004850	1391	149	917							
174	OBS	T1380	0453	35043	2778			14	920							
	STD	1400	0447	3504	2779	0004687	1439	149	921							
			0.5-				= .									

0392 34978

STD

T1639

NCT	CAMP				-=	MAR	SDEN	STATE	ON TI	M E		01	RIGINA	TOR'S	DEPTH	MAX.		WAVE		WEA-	CLOUD	T		NODC
ID.	CODE	LATITU		LON	AGITUDE PINOCE	SQU	ARE	- 10	5 M T)		YEAR	CRUISE		ATION	80110	OF		SERVATION	- 1	THER	CODES		2.	TATION
NO.			1/10		1/10 =	10"	1,	MO D	AY H	R,1/10		NO.	NE	I AA BER	001101	S'MPL'	DIR	HGT PER	SEA		TYPE A M	7		UMBE*
303	CK	3504	N	04	803 W	113					968				3840	16	35		2	X 1	8 5		(	2000
								TER	٧.	IND	BAR	U-	R TEAM	- VIS	NO.	SPE	CIAL							
							CODE	TRANS.	DIR.	SPEED OR	MET			WET COL		OPERAL								
							0001	+ +	35	518	18		-	206	14	+		-						
f			_			_		4	,	310	1.0	3 21	•		1-	1						т		
- 1	MESSENGI TIME	CAST	CA:		DEPTH (m)	1	*C	S	٧	SIGA	4 A - T	SPECIFIC	VOLUM	DYN. /	A. SC	OCITY	O2 ml/	PO4-P		TA L-P	NO2-N	NO3-N	5104-51	рН
	HR 1/10		, , ,	r (		1						140 WA		x 10 <sup>3</sup>	VEI	OCHY		h8 - a1,	116	0 - 01/1	µg − ot, l	29 - at/l	אן ה - פע l/l	
												ĺ												
				I D	0000		386	364		248		0031	434	0000		338								
	133	3	08	-	0000	_	386	364	-	248						338								
				TD	0010		384	364		248		0031		0031		339								
				TD	0020		383	364		248		0031	400	0063		340								
	133	,	OB		0024		382	364		248		0020	300	000		341								
	133		0B:	TD c	0030 0048		297 085	364 363		250	-	0029	280	0093		320 268								
	153	,		T D	0050		068	363		256		0023	822	0146		264								
	133		OB:		0072		903	363		260		0023	022	0140		222								
	1.7.			T D	0075		884	363		261		0019	444	0200		217								
	133	3	OB:		0096		779	363		263						190								
			S	TD	0100	1	774	363	1	263		0017	139	0246		189								
			5	ΤD	0125	1	740	363	1	264	4	0016	379	0288	3 15	184								
	133	3	OB:	5	0144	1	714	363	19	265	1				15	179								
				ΤD	0150		706	363		265		0015	707	0328		178								
	133	3	08		T0193		647	362		266						166								
			_	TD	0200	_	638	362		266	-	0014		0409		164								
				TD	0250		574	361		266		0014	442	0478		152								
	133	,	OB:		0295		516	360		26		0011	027	254		140								
				TD TD	0300 04 <b>0</b> 0		510 378	360 358	_	267 268		0013		0549		139								
	133		0B:	-	10400		378	358		268		0013	054	0684		110 110								
	193	,		TD.	0500		210	355		270		0011	815	0809		067								
				TD	0600		047	353		271		0010		0919		024								
	133	3	OB:	-	0603		042	353		27		2010	,,,	0,1		023								
				TD	0700		868	352		273		0008	393	1013		973								
				TD	0800		729	351		275		0006	-	1090		936								
	133	3	OB:	5	T0816		710	351		279	6				14	931								
				TD	0900		644	351		276		0006		1154		919								
				T D	1000		579	351		277		0005	377	1211		909								
	133	3	OB:		1028		563	351		277	_					907								
				TD	1100		538	351		277		0005		1263		909								
				TD	1200		505	350		277		0004		1313		912								
	127			10	1300		476	350		27		0004	/19	1361		917								
	133	,	08		T1313		472	350	_	277		0001		1404		917								
				TD TD	1400 1500		449 426	350 350		271		0004		1408		922 929								
	133		OB:	_	11589		408	349	_	278		0004	049	1454		936								
	133	•	00.	_	11709	U	700	277	,,	210	, 0				14	, ,00								

FERENCE SHIP LATITU	DE LOI	NGITUDE BOUTE	MARSDEN SQUARE	STATION TI	ME	ORIGINA CRUISE ST	TOR'S ATION	DEPTH TO	MAX. DEPTH OF		WAVE ERVATIONS	WEA-	CLOUD			NODC
NO. CODE	1/10	1/10 2	10" 1"	MO DAY H	R,1/10		J M BER	MOTTOR	S'MPL'S	DIR	HGT PER SE	CODE	TYPL AM	Ť	- [	NUMBER
11303 CK 3510	N 04	759 W	113 57	07 16 1	23 1968	E14 003		3109	15	35	2 3	×1	8 6			0003
1µ303  CK   3310	14   04	127 - 1	WA		UNID	A ID YEAR	P. *C	NO.			2 15 1	1 ^1	1 6 10	1	1	0003
			CDLOR	TRANS DIR.	SPEED METE		WET COD	OBS	SPEC VASSEQ							
			CODE	imi Dik,	FORCE (mbs	1) BULB	BULB	DEPTHS	O O S C M P -							
				36	506 20	7 222	194 8	14	-							
MESSENGE CAST				1			. \$ 00				20.0					
11m2 97 ND.	CARD	DEPTH (m)	1 °C	s */	SIGMA-T	SPECIFIC VOLUA		A		O 2 m1/1	PO4-P pg - at/l	101AL-F pg = a1/1	NO2-N ug - at/1	NO3-N yg - ol/l	SI O4-5	
HR 1/10		-									+			-		1
	STD	0000	2356	3643	2488	00 30 8 4 3	0000	153	30		1		i	l	1	ı
123	085	0000	2356	36434	2488	00 30 64 3	0000	153								
123	STD	0010	2307	3644	2502	0029505	0030									
	STD	0020	2239	3644	2522	0027669	0059									
123	085	0025	2197	36439	2534			152								
	STD	0030	2127	3642	2552	0024849	0085									
	STD	0050	1908	3636	2606	0019796	0130									
123	085	0051	1900	36355	2607			152								
	STD	0075	1772	3633	2637	0016876	0176									
123	OBS	0076	1769	36324	2638			151	84							
	STO	0100	1740	3632	2645	0016251	0217	151	80							
123	OBS	0101	1739	36316	2645			151	79							
	STD	0125	1738	3637	2649	0015929	0257	151	84							
	STD	0150	1737	3639	2651	0015845	0297	151	88							
123	OBS	0152	1737	36392	2651			151	88							
	STO	0200	1687	3631	2657	0015437	0375	151	80							
123	085	T0202	1685	36307	2657			151								
	STD	0250	1647	3625	2662	0015127	0451									
	STD	0300	1592	3616	2668	0014707	0526									
123	OBS	0305	1586	36152	2668			151								
	STD	0400	1433	3588	2681	0013612	0668									
123	085	T0405	1425	35868	2682			151								
	STD	0500	1272	3563	2695	0012436	0798									
122	STD	0600	1117	3544	2711	0011116	0916									
123	OBS	0609	1103 0958	35429	2712	0000000	1017	150								
	STD	0700 0800		3534 3525	2731	0009239										
123	OBS	0812	0821 0806	3525 35244	2746 2748	0007820	1103									
123	STD	0900	0707	3519	2748	0006656	1175	149								
	STD	1000	0616	3514	2766	0005829	1238									
123	085	1015	0604	35138	2768	5005029	1230	149								
167	STD	1100	0557	3511	2771	0005345	1293									
	STD	1200	0509	3508	2775	0005021	1345									
123	085	T1275	0477	35060	2777	-00,021	1545	149								
	STD	1300	0467	3505	2777	0004780	1394									
	STD	1400	0434	3502	2779	0004659										
	STD	1500	0407	3499	2779	0004614	1488	_								
123	OBS	T1520	0403	34983	2779			149								

																	-										-			
REFERENCE	SHIP					L 5	MAR	SDEN	\$1.	ATION	TIME				CRIGIN	ATOR'S		DEPTH		AX PTH	0.00	WAVE		WEA		CLOUD			NODC	
CTRY ID.	CODE	LATITU				DAIF	SQU			1G M T		YEA	A.R	CRUISE NO.		STATION NU MBE		80TT0		OF LPL*S		ERVATI HGT PE		THE	e .	CODES			TATION UMBER	
	+		1/10		1/10	+	10*	1*			HR,1/10				-							NG: 10		-	1		-			
311303	3  CK	3504	N	047	757 W		113	57		17	126	19	68				-	4206	, 1	6	26		0	X1		8 3		1 (	0004	
								W A		-	WIND		BARO	• -		MP °C	Vis	NO.		SPECI										
								COLOR	TRAN	S DIR	- OR	'	METEI (mbs1		ULB ULB	WET		DEPTH	S OBS	ERVA	TIONS									-
									+	23	+	-	210	2	22	189	8 (	14	+											
		, ,					_		+	2.0	31.			1-		1		4	1			_			_					_
	MESSENGR TIME	CAST NO.	CAR		DEPTH	lm1	T	*C		s *	510	SMA-	-7	SPECIFIC	ALY-X		≅ Δ D Dγn. M		LOCIT	, (	0 g mi/l	PO 4		TOTAL		02-N	NO3-N	St D4-Si	рН	Š.
	HR 1/10	1		rt										A.101			x 10 <sup>3</sup>	1 0	LOCII	'		νg -	a1'1	µg = 01/	1 11	g = 01/1	µg - 01/1	yg - 01, 1		
I																Ì														
				TO	000			350		44		490		003	064	6 (	000		328											
	126	•	083		000			350		438		490							328											
				ID	001			267		41		512		002			1030		309											
				TD	002			180		39		535		002	642	9 (	057		289											
	126	•	08		002		_	126		379		549		00-		-			275											
				TD	003			079		38		562		002			082		264											
				TD	005		_	895	-	39		511		001	928	2 (	125		217											
	126	•	08	ร ไก	005 007			888 781		387 36		513 538		001	492	2 (	171		188											
	126		08:	-	007			772		990 957		540		001	003	) (	,,,,		186											
	120	,		10 2	010			748		538		547		001	600	1 (	212		183											
	126		08		010			744		386		5 <b>4</b> 9		901	000	1	, , , , ,		182											
	120	,		TO	012			736		38		650		001	580	7 (	251		183											
				TO	015			721		36		652			569		291		183											
	126		08		015		_	716		356		553							182											
				TD	020			670		27		658		001	534	0 (	368	15	179	5										
	126	5	08	5	T020	8	1	661	36	5255	26	659						15	173	3										
			5	TD	025	0	1	610	36	517	26	664		001	487	6 (	444	15	163	3										
			S	TD	030	0	1	547	36	507	26	671		001	437	0 (	517	15	15	1										
	126	5	08	5	031	6	1	527		5037	26	673							14											
				ΤD	040			418		586		683		001	344	4 (	0656		124											
	126	•	08		T042			378		803	_	687					_		119											
				TD	050			251		61		698		001			784		082											
			_	TD	060		_	079		539		714		001	078	, (	899		036											
	126	•	08		063		_	013		322		720							018											
				TO.	070			893 734		525 515		734 751		000	880		)997 1077	_	98: 93											
		:	08:	T D	080 T084			734 673	_	913 5119	_	151 <b>7</b> 57		000	(19	О.	10//		193 192:											
	126	,		S TD	090			636	-	5115		761		000	610	ς .	1144		915											
				TO	100			575		509		768		000			1203		90											
	126		08:		107			539		5074		771		500	JU1				905											
	120	•		TD	110			533		50 <b>7</b>		772		000	528	3	1257		906											
				TD	120			511		507		774			512		309		914											
				TO	130			488		506		776			496		1360		92											
	126	5	08	_	T135			474		5062		778							92											
	-			TD	140			463		505		778		000	483	1 :	409		928											
				TD	150			436	3	503		779		000	471	1	1457	14	93	3										
	126	5	08	5	T163	0	0	400	34	4977	2	779						14	939	9										
			-		_																									

0.	SHIP	LATITU		LON	ROCTE SOLIDS	M ARS	ARE		ON TIE		YEAR	CRUISE		TATION	$\neg$	DEPTH TO IOTTOM	DEPTH OF		WAVE SERVATIO		WEA	CODES		S	NODC TATION UMBER
10.		·	1/10		1/10 =	10°	1.	MO D	AY HR	.1/10		NO.	N	UMBER	1,	OHUM	S'MPL	S DIP.	HGT PER	5 E A	CODE	TYPE AM	7		OMBER
103	CK	3502	N	04	801 W	113	58	07 1	8 0	94 1	968	E14	005	5	4	206	14	27		2	ΧO	0		- 1	0005
							W.A.		W	SPEED	BAR	)+ <u> </u>	AIR TEM		ııs.	NO.	SPE	CIAL							
							COLOR	TRANS.	DIR.	OR	M ETE		UL8	WET CI	900	OBS. DEPTHS	OBSERV	ATIONS							
									24	516	17		33	211 8		13	_	-							
		1		_				4	2.4	310	12,		22			1	<u>'</u>		-	_					1
^	TIME	CAST NO.	CAR		OEPTH (m)	Т	*C	5	٠/	SIGM	A-T		ALY-X10	2 OTN.	М.		UNO OCITY	0 2 ml/l	PO 4-		O TA L - P		NO3-N	SI O4-SI	pН
Ŀ	R 1/10	1												x 1	03	1	00111		hå - o	-	yg - 01/1	n8 - a1/1	yg - at/l	µg - a1/l	
		1								ŀ				1											
			ST		0000		352	364		248		003	0673	000	0		329								
	094	•	085		0000		352	364	_	248		00.2	0457				329								
			5 T 5 T		0010 0020		337 265	364 364		249 251	_		0453 8578				327 310								
	094		085		0020		244	364		251		502	.,,,				305								
	• , ,		51		0030		085	363		256		002	3970	008	16		265								
	094	,	085	5	0042	1	910	363	69	260	6						219								
			ST	D	0050	18	853	363	7	262	0	001	8394	012	9	15	205								
	094		085		0062		791	363		263							189								
			ST		0075		760	363		264		001	6341	017	2		182								
	094		085		0082		748	363	_	264		001			_		179								
	094		ST 085	-	0100 0124		747 746	363 364		264 265		001	5910	021	. 2		183 186								
	094	•	51		0124		745	364		265		003	5799	025			186								
			ST		0150		728	363	-	265			5634				185								
	094	,	085		10168		715	363		265		•••	,,,,,		•		184								
			ST		0200		690	363		265		001	5361	036	9		181								
			ST		0250		642	362	4	266	2	001	5086	044	5	15	174								
	094	•	085		0253		639	362		266					_		174								
	001		ST		0300		579	361		266		001	4710	051	9		161								
	094	)	08 S		70344 0400		519 404	360 358		267 268		001	3371	066			149 119								
			ST		0500		214	355	-	270			1965				068								
			ST		0600		042	353		271		_	0562				022								
	094	,	085		T0695		896	351		272					-		982								
			ST	D	0700	0	888	351	9	273	1	000	9160	099	8	14	980								
			ST		0800		748	351		274		000	7410	108	1		943								
	094	•	085		0882		657	351		275					_		920								
			\$1		0900		644	351		276			6311				918								
			51 51		1000 1100		580 530	350 350		276			5685 5190				909 905								
	094		085		T1131		517	350		277		300	7190	, 126	• 4		905 905								
	- , -	•	51		1200		493	350	_	277		000	4876	131	4	_	907								
			51		1300		471	350		277			4761	_		_	914								
	094		085		T1393		462	350	-	277			-		_	_	926								

REFERENCE	SHIP	LATITU	DE	LONG			RSDEN U ARE	STAT	ON TI		YEAR		RIGINA	TOR'S		DEPTH	DEPT		WAVE SERVATIO	NS	WEA- THER	CLOUD			NODO	N
CTRY ID.	CODE	•	1/10		1/10	10.		MO C				CRUISEI NO. I		MBER		80110M	S"MPL		HGT PER		CODE	TYPE A 11			NUMBE	
311303	CK	3501	N	0480	005W	11			9 1		968	E14	006		. 4	297	42	30		1	× 1	8 5			000	6
							_	TER		SPEED	BARO	·	IR TEM	WET	VIS	NO. 085.	SP	ECIAL VATIONS								
							CODE		DIR_	OP FORCE	Imbs	) 81,	LB	BULS	+ +	OBS. DEPTHS	0 8 3 6 8	77110113								
								Ļ	34	507	190	2 2	8	200	8	20	L	,					T	,		
	MESSENGE	CAST	CAR	D	DEPTH (m)		r tc	5	٠,,	SIG M.	A -T	SPECIFIC	VOLUM	£ 5	A. D.		UND	0 2 ml	PO4-		OTA L-P	NO2-N		Si O4-		н
	HR 1/10	J NO.	TYP			-		-			-	ANUM	LV-1107	x	103	VEL	OCITY		10-0	01	rg • 01 1	hB = at	µg - 01 1	h8 - 0	1 1	
					2000	1		1		240	. 1	00.20		1	000	1	220							į		
	123	3	51 085		0000		2355	364 364		249 249		0030	1217	υt	000		330 330									
	* 2 .	,	51		0010		2350	364		249	_	0030	382	00	30		331									
			51		0020		345	364	9	249	5	0030	245	00	61	15	331									
	123	3	085	,	0023		2344	364	89	249	5					15	331									
			ŞT		0030		200	364		253		0026	641	00	189		296									
	123	3	085		0048		1927	363		260							225									
		_	\$ T		0050		1910	363		260		0019	918	0 1	136		221									
	123	•	OBS		0072		1780 1776	363 363		263 263		0016	716	0.1	182		187 187									
	123	3	51 083		0075		1756	363		264		0016	,,10	0.1	.02		184									
	12:	,	ST		0100		1755	363	-	264	-	0016	085	0.2	223		185									
			51		0125		1747	363		264		0015			63		187									
	123	3	085	,	0144		1736	363	94	265	1					15	187									
			51		0150		1731	363	9	265		0015	704	03	302		186									
	123	3	085		10192		1692	363		265							181									
			ST		0200		1684	363		265		0015			380		179									
		_	51	-	0250		1632	362		266		0015	006	0.4	56	_	171									
	123	3	085		0292		1582 1571	361 361		266 266		0014	404	0.6	530		161 159									
	123	2	085		10394		1437	358		268		001	•606	0	,,0		129									
	12.	_	51		0400		1429	358		268		0013	3674	0.6	571		127									
			51		0500		1279	356		269		0012			302		091									
	123	3	083	,	0592		1123	354	41	271	0					15	051									
			51		0600		1101	354	_	271	_	0010	_		920		044									
			51		0700		0864	351		273		0000	3914	10	020		971									
	123	3	OBS		0795		0713	350		274							927									
			51		0800		7711	350		274		000.			102		927									
	123	a	\$1 083		0900		0674	351 352		276 276		0000	383	1.	171		931 931									
	12.	_	51		1000		0631	352		276		0009	60A	1 :	231	_	931									
			51		1100		0570	351		277		000			285		922									
			\$1		1200		518	351		277	-	0000			336	_	918									
	12	3	085	;	11255		3494	350		277						_	917									
			51		1300		0478	350		277		0004			385	_	917									
			51		1400		0447	350		277		0004			32		921									
	1.0	2	51		1500		3420	350		277		0004	641	1 4	79		926									
	12	3	085 S1		17504		04 <b>19</b> 0402	350 349		277 278		0004	.772	1.4	597		926 960									
			51		2000		0383	349		278		0004			717		995									
	154	4	OBS		72169		0368	349		278		500.	. , , (	•	/		017									
	• -		51		2500		0333	349		278		000	610	1	952		059									
	15	4	083		12726		0312	349		278	5				_	15	089									
			5 7		3000		0288	349		278		000	4409	2	177	15	126									
	15		083		3274		0267	349		278							164									
	15	4	083		T3838		0232	348	_	278							247									
			51		4000		0229	348		278		000	4341	20	515		275									
			083		4111		0226	348	88	278						16	702									
	154 154		OBS		14236		0221	348		278							293 313									

EPENCE SHIP	LATITUDE	LONGITUDE NO.	MARSDEN	STATION TI	ME YEAR	ORIGINA CRUISE ST	TOR'S ATION	TO D	MAX. EPTH (	WAVE DESERVATION:		CLOUD		S	NODC TATION
NO. CODE	1/10	1/10 ° Z	10" 1"	MO DAY H	R.1/10		MBER	BOTTOM S"	MPL'S DI	L HGT PER S	EA CODE	TYPE AM	1	N	UMBER
11303 CK 3	3503 N	04801 W	113 58	07 20 1	27 1968	E14 007		4252	13 0:	3	1 X1	8 5			0007
			WA	TER V	VIND BAR	O- AIR TEM	P. °C VIS.	NO.	SPECIAL						
			COLOR	TRANS. DIR.	OR (mb		WET COD	E DEPTHS OF	SERVATION	ıs					
			CODE		FORCE			1,4		$\dashv$					
				02	513 22	4 222	200 7	14							
MESSENGE TIME OF HR 1/10	CAST CAR		t *c	s ·/	SIG M A - T	SPECIFIC VOLUM	£	SOUNE		PO4=P yg - 01/1	101AL-P		NO3-N vg - 01/1	\$1 O4=\$1 vg - a1/1	
	ST	-	2369	3645	2485	0031085	0000								
127	OBS		2369	36451	2485	0000015	0000	1533							
	ST		2284	3643	2508	0028915									
	ST		2193	3641	2533	0026632	0058								
127	08.5		2155	36397	2542	0034043	0000	1528							
	ST		2085	3638	2560	0024042	0083								
127	OBS		1920	36352	2602 2608	0019575	0127	1522							
127	ST		1896	3635 36349	2638	0019575	0127	1521 1518							
127	08S ST		1775 1767	3635	2640	0016577	0172								
127	085		1736	36365	2649	0016577	0172	1517							
121	ST		1734	3637	2650	0015785	0212		-						
	S T	-	1724	3636	2652	0015653	0252								
127	085		1716	36362	2654	0010000	0232	1517							
121	ST	_	1708	3635	2655	0015462	0291								
127	OBS	-	1680	36310	2658	0017.01	02/1	1517							
12.	ST		1672	3630	2660	0015168	0367		-						
	s ī		1631	3623	2664	0014911	0442								
127	085		1603	36178	2666			1516							
	ST		1565	3610	2669	0014546	0516								
127	0B S		1469	35926	2677			1513							
	ST		1412	3584	2683	0013465	0656								
	S T		1246	3561	2699	0012073	0784								
127	085		1182	35526	2705			1506							
	ST		1031	3534	2718	0010294	0896	1501	8						
	\$ T	D 0700	0842	3517	2736	0008589	0990	1496	2						
127	OBS	0700	0842	35166	2736			1496	2						
	s ī	D 0800	0708	3517	2756	0006680	1066	1492	8						
127	OBS	0862	0648	35167	2764			1491	4						
	ST	D 0900	0638	3517	2766	0005798	1129	1491	7						
	ST	D 1000	0606	3517	2770	0005466	1185	1492	0						
127	OBS	T1073	0577	35172	2774			1492	1						
	ST	0 1100	0565	3516	2774	0005090	1238	1492	1						
	51	D 1200	0517	3512	2777	0004838	1287	1491	7						
127	OBS	T1290	0467	35052	2778			1491	1						

CTRY CODE		SHIP	LATITUI	DE L	ONGITUOE TO NOT THE	MARSDEI SOUARE		STATION TI (GMT)	۲	EAR		ATOR'S TATION TUMBER		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL"	1 0		VE ATIONS PER SI	WEA THE COD	CODES			NODC TATION NUMBER
311	303	CK	3502		4753 W		7 0			968	E14 00	8		4206	13	10			o   x1	8 2			0008
514	1 30 3	( )	3302	N 1 O	4122 41		WAT		VINO	BARC	A ID TE	MP. C		NO.	SPE	CIAL	7						
								TRANS. OIR.	SPEED OR	METE	R ORY	WET	CODE	OBS. DEPTHS		ATIONS	s						
						CC	DE	(m)	FORCE	(mbs		BULB	-	-			-						
								09	515	254	+ 228	206	8	14			1		-			Υ	_
	[	MESSENG TIME HR 1/10		CARD TYPE	DEPTH (m)	1 ,0		s *4.	SIGMA	T – A	SPECIFIC VOLU	ME S O7 DY	Δ D M 10 <sup>3</sup>	. VELO		O <sub>2</sub> ml		O4-P g - at/l	101AL-		NO3-N yg - at/i	\$1 O <sub>4</sub> -5 µg - al/	
	Ì																						
				STD	0000	235		3645	248		00 30 7 9	8 00	000	153									
		12	9	085	0000	235		36448	248		001004		221	153 153									
				STO		235	-	3645	248		003084	_	031 061	153									
			^	STD	0020	230		3645 36446	250 250		002950	1 00	0 L	153									
		12	y	OBS	0022	229 216		3644	254		002578	7 00	189										
			_	510	0030 0043	200		36414	258		002570	, 00	<b>,</b> 0 3	152									
		12	9	085 510		193		3639	260		002029	a n:	135	152									
		12	0	OBS	0065	183		36352	262		002027			152									
		12	7	STD		179		3636	263		001704	5 0	181										
		12	0	085	0075	175		36362	264			- 0.		151									
		1 4	,	STD		174		3636	264		001600	7 02	223										
				STD		171		3635	265		001560		262										
		12	q.	085	0127	171		36347	265					151	177								
		* 2	_	STD		169		3632	265	5	001542	8 0:	301	151	175								
		12	9	085	T0168	168		36301	265	7				151	173								
				STD		165	2	3626	266	1	001500	4 0:	377	151	169								
				STD		160	1	3618	266	7	001460	4 0	451	151	161								
		12	9	085	0254	159	7	36168	266	7				151	160								
		_		STD	0300	154		3607	267		001430	5 0	523	-									
		12	9	085	T0338	149	9	35989	267	5				151									
				STO		142		3588	268	_	001350		662										
				STO		128		3568	269		001236	8 0	792										
		12	9	085	0504	128		35673	269					150									
			_	STO		110		3543	271		001087	0.0	908										
		12	9	OBS	70671	097		35283	272		000000		000	150									
				STO		0 90	-	3523	273		000916	_	008 091										
				STO		072		3511	274		000739	7 1	091		919								
		12	7	085	0844	067		35078 3511	275 276		000634	0 1	160	_	919								
				STO		0 64 0 60		3514	276		000565		220		919								
		1 2		510 085	T1075	057		35152	277		200,00		0		919								
		12	7	085 ST0		056		35152	277		000513	6 1	274		920								
				STO		052		3513	277		000483		324		919								
				5 T C		048		3508	277		000475		371	-	919								
		12		085	T1325	047	_	35065	277		200412	- 1	1		919								
		12	. ,	003	11727	V <b>-</b>	•	32003	4 / /	-													

STEP SO COOR		1049710H	ž	STATION TIME OWT MO DAY HE!!		CAU SE		0977H *0	WAIL DEFTH DI	CESE	AAVE REATIONS	A FA -	0.000 000ES	NODC STATION
311303 CK	3503 N	04801 W	113 58	07 22 132	1968	E14 00	9	4206	15	08	C	×1	8 4	0009
			0001	TANK OR 15	TE TE	EF DRY	A ET LOGDE EULE	085. 085. 087"HS	SPEC A 7 452ED	A. TIONS				

				11	511 24	7 228	200 8	14							
VETTO FAST	7.425	5 FFF - +	. 5	5 *	5 G W A ~*	\$80%C +0.045	* 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	VELDOUT SOUND	c: -	F04-P	1214.4	NO2=N	S1 C4-S +9 + 01	;=	200
	STD		2347	3637	2485	0031067	0000	15327							+
132	088	0000	234~	36368		0001007	0000	15327							
	SID		2251	3633	2510	0029735	0030	15304							
	STD		2158	3631	2535	0026422	0057	15282							
132	388	0025	2113	36305			00)/	15271							
	STD	0030	2062	3631	2561	0023983	0083	15258							
	STO		1895	3631	2605	0019857	0127	15216							
132	OBS	0050	1896	36311	2605		C 4 L 1	15216							
	STD	0075	1774	3637	2641	0016567	0172	15186							
132	280	0075	1774	36374	2641		01/2	15186							
130	DB S	0000	1746	36393	2649			15182							
	STD	0100	1746	3639	2649	0015882	0213	15182							
	SID	3125	1732	3638	2651	0015715	0213	15182							
122	085	0149	1714	36359	2654		0 2 3 2	15180							
	STD	0150	1713	3636	2654	0015527	0291	15180							
	STD	2500	1659	3627	2660	0015076	0368	15171							
132	^8 S	10200	1659	36272	2660		0 ) 3 0	15171							
	STD	0250	1609	3620	2667	0014636	0442	15163							
	SID	0300	1552	3611	2573	0014189	0514	15153							
132	1 <u>9</u> 5	1301	1551	36103	2672		0 2 1 4	15153							
	3.71	1400	1421	3586	2682	0013507	0652	15125							
132	^ E =	T0403	1417	35848	2682		0072	15124							
	STD	0500	1254	3561	2698	0012228	0781	15083							
	570	0600	1089	3540	2713	0010895	0897	15039							
132	085	0605	1081	35386	2713		0091	15037							
	STD	0.070	0907	3517	2725	0009621	0999	14987							
	SID	0.00	0767	3506	2739	0008362	1089	14949							
132	085	0810	0.756	35054	2740	00.0302	1009	14946							
	SID	0900	0692	3513	2755	0006870	1165	14946							
	STO	1100	0630	3518	2768	0005739	1228	14930							
132	08.5	1013	0622	35185	2769	0003133	1220								
	STD	1100	0579	3516	2773	0005289	1284	14929							
	SID	1200	0533	3512	2775	0005060	1335	14926 14924							
132	085	T1270	0503	35093	2777	0000000	1000								
	STD	1300	0491	3508		0004887	1385	14923							
	STD	1400	0452	3504	2778	0004755	1433	14923 14923							
	SID	1500	0416	3499		0004734	1481								
132	088	T1537	0404	34971	2778		1461	14924 14925							
								1 サソノラ							

REFERENCE CT#1 IO.	SHIP	LATITUDE 1/1	1	NGITUDE NGCT#	MAPSDEN SQUARE	STATION (GM	T)	YEAR	CRUISE NO.		OP'S TION MBER	DEPTH TO BDTTOM	MAX. DEPTH OF	1	08559		_	WEA- THER CODE	CODES		T	NODC STATION NUMBER
				17 10	10	MO DAY			+ + +				S'MPL"			GT PER	1	+	TYPE AM		+	
311303	H CK I	3503 N	104	806 W	113 58	07 23	134 WIND	*	E14	O10	+ 1	3292	15	1	00		0	X1	0 1		1	0010
							SPE	BAR MET	0.		WET COD	. OB5.	SPE OBSERV	CIAL								
					CODE	TRANS DI	R. OI		s) 8t	LB I	ULB	DEPTHS	COSER	,								
						2	1 50	6 23	7   23	9 2	211 8	14										
	MESSENGE TIME HR 1/10	01 NO.	A R D I Y P E	DEPTH (m)	1 %	s ·/	. SII	GMA-T	SPECIFIC	VQLDME LT-110"	₹ △ D DYN, A x 10 <sup>3</sup>		DCITY	02	m1/I	PO4-		ТОТА L—Р ид - а1/1	NO2-N µg - ot/1	NO3-N ug - at/1	-40 IS	
			STD	0000	2384	3638	2,	475	00 32	0.26	0000	15	336									
	134		BS	0000	2384	36379		475	00 )2	020	0000		336									
	• • •		STD	0010	2278	3634		503	0029	400	0031		311									
			STD	0020	2185	3632		528	0027		0059		289									
	134		35	0024	2152	36312		537					281									
		:	STO	0030	2113	3631	2	547	0025	277	0085		272									
	134	01	3.5	0049	1994	36302	2 2	579				152	243									
			STD	0050	1987	3630	2 !	581	0022	178	0133	15	241									
	134	01	3 S	0074	1845	36312	2 21	618				152	206									
			STD	0075	1841	3631	_	619	0018	600	0184		205									
	134		BS	0098	1766	36336	_	640					187									
			STD	0100	1764	3634		640	0016		0558		187									
			STD	0125	1736	3634		647	0016	127	0269		183									
	134		35	0148	1712	36336		653					179									
			STD	0150	1710	3633		653	0015	653	0308		179									
	134		35	T0198	1664	36269		659	0016	104	0304		172									
			STD STO	02 <b>0</b> 0 02 <b>5</b> 0	1662 1605	3627 3617		659 665	0015	-	0386		172									
	134		35	0298	1545	36071	_	671	0014	194	0461		162 150									
	15.		STD	0300	1542	3607	_	672	0014	24.1	0533	_	149									
	134		35	T0398	1405	35834		684	0014	. 201	0555		119									
	13-	_	STO	0400	1403	3583	_	584	0013	351	0671		119									
			5 T O	0500	1282	3565		695	0012		0800		093									
	134		35	0597	1136	35470	_	709	12		0000		056									
			STD	0600	1128	3546		710	0011	173	0919		054									
			STD	0700	0903	3522		730	0009		1021	_	986									
	134		35	0796	0748	35093		744					941									
		:	STD	0800	0745	3510		745	0007	731	1105											
		:	STO	0900	0676	3514	2	758	0006	559	1177	144	931									
	134	08	3.5	0996	0620	35164	2	768				14	925									
		:	STD	1000	0618	3516	2.	768	0005	711	1238	149	925									
			STD	1100	0578	3515		772	0005	348	1293	14	926									
			STD	1200	0538	3513		775	0005	056	1345	144	926									
	134		3.5	T1246	0519	35114	_	776					926									
			STO	1300	0497	3509	5.	777	0004	897	1395		925									
	134		STD BS	1400 T1492	0455 0417	3505 35000		779 <b>7</b> 79	0004	722	1443		924 923									

REFERENCE	SHI COD		1	ONGITUDE SO	MARSE	R E	STATION TI		TEAR	ORIGI CPUISE NO.	NATOR	ON	DEP	0 0	DEPTH OF	OBSE	WAVE PVATION		WEA- THER COOE	CLOUD CODES			NOOC STATION NUMBER
DE NO	0.	-	1/18	1/10 ±	10		MO DAY H				NUM	1511	_		'MPL'S		GT PER		<del> </del>		+	-	
31131	03 CK	3503	8 N 0	4804 W	113			29 1	968	E14 0			329	92	15	00	1 1	0	×1	8 4	1	1	0011
						WAT	EP V	IND	BARO	•	EMP. 1		NO		SPECIA	NE.							
							TRANS, DIR.	SPEED	METER (mbs)		W S	1 000	OB DEP1	THS O	BSERVAT	IONS							
						CODE		FOICE					+										
							03	506	247	244	23	3 8	14	4			-	_					-
	MESS!	ENGI CAST	CARD	DEP*H (m)	Ť	~	s *:.	SIGM	A + T	SPECIFIC VO	UME E'07	₹ ∆ 0 0YN, 6 x 10 <sup>3</sup>	Ψ.	SOUN		2 m1/1	PO4-P		0 TA L-P	NO2-N pg = al/1	NO3-N ug - at/l	\$1 Oa-	
	HR 1	1/10	-		-				-				-		_		-	+-					+
		1		0000	2.2		3640	247	_	00320		0000	ι.,	1533	27		1						1
			STD	0000		89 89	36396	247		00 32 0	+ >	0000		1533									
	,	129	085			86	3637	250		00293	96	0031		1531									
			STD STD	:		90	3635	252		00270		0059		1529									
	,	129	OBS	0025		45	36333	254		00210	• -	003.		1528									
	,	127	STD			00	3635	255		00246	49	0085		1526									
			STD			50	3640	259		00205		0130		1523									
	,	129	OBS	0050	_	50	36404	259		00203	• -	0.5		1523	_								
		124	STD			24	3639	262		00176	49	0178		1520									
	,	129	085	0075		24	36388	262						1520									
		129	OBS	0099	_	66	36355	264						1518									
		127	STD			65	3635	264		00166	16	0220		1518									
			STO			35	3634	264		00160	74	026	1 :	1518	82								
	1	129	085	0149		0.8	36322	265						1517	78								
			STD		17	07	3632	265	3	00156	57	030	. :	1517	78								
	,	129	OBS	T0198	16	59	36258	265	9					1517	71								
			STO		16	57	3625	265	9	00151	90	0378	3	1517	70								
			STD	0250	16	07	3617	266	5	00148	10	0453	3	1516	62								
		129	OBS	0299	15	552	36073	267	0					1515	52								
			STD	0300	15	51	3607	267	0	00144	50	0526	5	1515	52								
			STD	0400	14	18	3584	268	2	00135	75	0666	5	1512	24								
		129	OBS	T0401	14	17	35840	268	2					1512	23								
			STE	0500	12	79	3564	269	5	00125	01	079	7	1509	92								
			STE	0600	11	117	3544	271	1	00110	86	0915		1505									
		129	085	0600		117	35444	271						1509									
			SIL	0700	0.8	886	3520	273		00090	54	101		1497									
		129	OBS	T0795		733	35081	274						1493									
			STE	0800		730	3508	274		00076		1099		1493									
			ST			579	3513	275		00066		117		1493									
			STE			529	3517	276		00057	97	123		1493									
		129	085	1004		527	35172	276						1493									
			ST			580	3515	271		00053		128		149									
			STE			534	3512	277		00050	14	134		149									
		129	OBS	T1269		505	35094	277		00010	٠.			1492									
			ST			192	3508	277		00049		139		149									
			ST			454	3505	277		00047		143		149									
			ST			419	3501	278		00046	28	148		149									
		129	085	T1517	04	413	34998	277	7					149	20								

TRY ID.	SHIP	LATITU	DE	LONGITUDE	MAR	SDEN .		ON TI		YEAR	CRUISE	ORIGIN	ATOP'S		DEPTH	DEP	TH	085	W A V E		W EA		CLOUD		54	ACDC ATEN
DE NO.	CODE	•	1/10	1/10	10*	1*	MO E	AY H	P_1/10		NO.		+U MBE		80110M	, 5°M	PL*5	D18,	HST FI	F SEA	- cos		TPETAW		N	UNBER
11303	CK	3501	N C	4801 W	113	58	07 2	5 0	93 1	968	F14	01:	,		4206	1	5	00		0	X1		0 1		(	012
	,	,,,,,		,		V» A			VIND	BARG		AIR TE			NO.	T*			1	, ,			~ 1		`	.012
						COLOR	TRANS	DIR.	5PEED OR	METE	R	CRY	WET		OBS.	0000	PECIA ERVAT									
						CODE	(m		FORCE	(mbs		ULB	BUTB		-	_										
						·		24	502	25	7 2	28	222	7	14											
	MESSENGE	CAST	CARD	DEPTH (m)	1 -	°C	5	٠,.	SIGM	A = T		voru	ME	₹ A D	50	UND		a mili	1 60	4 - P	TOTAL-	r, N	102-N	NO3-N	\$104-5	ρН
	HR 1/10		TYPE						3.0		ANOV	ALT-I	0'	x 10 <sup>3</sup>	. VEL	OCITY	1	*	P0 -	01 /	باه - چير	1 2	g + a1/1	yg = a1/1	νg - at 1	2,11
		ĺ							,				ì						,							
			STO	0000	2	422	365	0	247	3	003	221	1 0	000	15	347										
	09:	3	OBS	0000		422	365		247							347										
			510			303	364		250			915		031		319										
			STD		_	193	364		253		002	641	5 0	058		292										
	093	3	OBS	0025		142	364		254							280										
			STO			091	364		256			398		084		267										
	093	2	SIC	0050		922 908	363 363		260 260		002	014	) (	128		224										
	09.	,	STO			792	363		263		001	713		174		220 191										
	093	2	0B\$	0077		786	363		263		001	1130	5 (	11.14		191										
	0 7.	,	510			758	363		264		001	642	2 0	216		185										
	093	2	OBS	0102		756	363		264		001	042	) (	210		185										
	- /.		STO		_	742	363	_	264	_	001	614	3 (	257		185										
			STO			723	363		265			579		297		183										
	09:	3	OBS	0154		720	363		265							183										
			STO	0200	1	677	362	8	265	7	001	542	7 0	375	15	177										
	09:	3	085	T0205	1	672	362	76	265	8					15	176										
			STO	0250	1	630	362	0	266	2	001	510	5 0	451	15	170										
			STO			572	361		266		001	470	1 0	526	15	159										
	09:	3	085	0309	_	560	360		266							157										
			STO			420	358		268		001	3488	5 (	667		124										
	093	3	OBS	T0412		401	358		268					<b></b> .		120										
			STO			269	356		269			230		796		088										
	0.00	,	STO			109	354		271		001	104	1	912		047										
	093	3	085 ST0	0615		084 903	354		271		000	011		013		040										
			STO			744	35 2 35 1		273 274	_		911! 771!	_	013	_	986 941										
	093	a	0BS	T0814		727	350		274		000	( / 1 :	> 1	091		936										
	U 9 .		STO			673	351		275		000	6581	A 1	169		930										
			5T0			617	351		276			569		230		925										
	093	3	OBS	1027		603	351		277		550	, ,			_	924										
			STO			572	351		277		000	5336	5 1	286		923										
			STO			532	351		277			504	_	337		923										
	093	3	OBS	T1286		500	350		277				•			924										
			STO	1300	0	495	350	8	277	7	000	494	2 1	387	14	924										
			STO	1400	0	460	350	5	277	8	000	479	0 1	436	14	926										
			STO	1500	0	429	350	_	277		000	476	2 1	484	14	930										
	093		OBS	T1539	0	417	349	9.0	277	0					141	931										

NCE ID.	SHIP	LATITU	DE	LON	GITUDE	PDCTP	MARS	DEN	STA	ION TI	ME	YEAR	CRUISE	DPIGIN A	TOR'S		DEPTH TO	Offin	08	WAVE	DNS	WEA-	CO	DES		51	NODE
NO.	CODE		1/10		1, 10	0 2	10*	1.	MO	DAY H	R,1/10		NO.		UMBER	8	DITON	STAPL"	DIR.	HGT PE	R SFA	CDDE	TYPE	A M.T		И	UMBER
303	cr	3503	N	04	804 W		113	58	0.7	26 1	25 1	968	F14	013		2	926	15	23		0	x1	8	4			0013
JU 3	(,	3707		0 -	O		ر ۲۰	WA			VIND	BARG	1	AIP TEN		1	NO.	1		' '	, -	, ,	, ,			,	
							İ	COLOR		DIR	SPEED	METE	R	DRY	WET	VIS ,	OBS. DEPTHS	0000000	CIAL								
								CODE	(m)	-	FORCE	(mbs	1) 8	ULB	BULB	-+	OL 11113										
										22	510	240	0 2	44	233	3	13										
	MESSENG		CA	90	0.488			°℃		.,.		A = T	SPECIFIC	. volu	AE DYN	0.	SD	UND	0 2 ml/	PO.	- P	TOTA L P	NO <sub>2</sub>	-N	NO3-N	5104-5	рН
	HR 1/10		1 Y	PE	DEPTH	im i		-	,		310 1	1	ANDM	ALT-110	×	03	VEL	DCITY	07	NB -	01,1	PB - 01 1	hā -	011	μg - et'l'	1' to - gu	1
		1 1	S	' מד	0000	0	24	451	36	49	246	53	003	3156	်ဝဝ	00	15	353		1	- 1		,	,			
	12	5	ов		000			451		487	246						15	353									
			S	TD	001	0	2	323	36	45	249	9	002	9848	00	32	15	324									
			S	TD	002	0	2	204	36	42	25	30	002	6854	0.0	50		295									
	12	5	OB	S	002	4		158		408	254							284									
				TD	003			083	36		256		002	3846	0.0	85		265									
	12	5	ов		004			921		380	260							223									
				TD	005		-	905	36	_	260		001	965	01	24		219									
	12	5	OB		007			813		354	26			<b>-</b>		٦.		197									
		_		TD	007			806	36		26		001	742	0.1	15		195 187									
	12	5	08	S TD	010			765 759	36	366	264		00.1	640	0 2	1 7		186									
			-	TD	012			727	36		264			5962				180									
	12	5	08		014			709		318	26		001	,,,,,	. 02	,,,		177									
		_		TD	015			705	36		26		001	5684	0.2	97		177									
	12	5	ОB		T019			679	36	294	26	57					15	176									
			S	TD	020	O	10	677	36	29	26	58	001	5354	03	75	15	177									
			S	TD	025	0	10	650	36	26	26	52	001	5129	9 04	51	15	177									
	12	5	OB	S	029	1		609		234	26							171									
				TD	030			594	36	_	26		001	4462	0.5	25		167									
	12	5	ОВ		1039			440		916	26							130									
				TO	040			421	35		26			3289		_		125									
				TD	050			227	35 35	_	2 <b>7</b> 1			1559 0172		_		074									
				TD TD	060 070			057 912	35	_	27			890				990									
	12	6	0B		077			815		206	27		000	0901	) 07	7 2		966									
	12	,	_	TD	080			792	35		27		000	7689	9 10	75		960									
				TD	090			697	35		27			643		-	_	940									
	12	5	08		098			630		194	27				-		14	928									
				TD	100	0		622	35	19	27	69	000	5549	9 12	06	14	927									
				TD	110	0	0	570	35	15	27	73	000	5234	12	60	14	922									
			S	TD	120	0		523	35		27		000	492	1 13	10		920									
	12	5	08		T124			504		099	27							919									
				TO	130			483	35	-	27			477				920									
				TD	140			448	35		27			462				921									
		_	_	TD	150			419	35	-	27		000	462	5 14	52		926									
	12	5	QB	S	T150	ь	0	417	35	000	27	80					14	926									

REFERENCE SHIP	LATITUDE 1/10	LONGITUDE	MARSOEN SQUARE	STATION TI	YEAR		DR'S TION MBER	BOTTOM	MAX. OEPTH OF S'MPL'S	085	WAVE ERVATION	ONS	WEA- THER COOE	CLOUD CODES			NODC STATION NUMBER
311303 CK	3504 N	04803 W		07 27 1		E14 014		3475	14	24		2		8 1			0014
314303 CK	1 3304 14 1	04005 41	WA		INO BAR	A IR TEAAR	0	NO.			,		1 ~ 1		1		0014
			COLOR	TRANS. OIR.	SPEED MET OR (mb	ER DRY V	VET COD	200	SPEC D85ERVA								
				21	512 23	7   256   2	44 8	14									
MESSENG TIME HR 3/10			7 %	s *4.	SIGMA-T	SPECIFIC VOLUME ANOMALY=1107	₹ △ 0 0 N. M x 10 <sup>3</sup>	SOUN		) 2 m{/l	PO a		TOTA L=P μg = et/1	NO2-N µg - 01/1	NO3-N µg - al/l	St O4=5 µg = at	pH
	ST	D 0000	2466	3648	2458	0033645	0000	1535	57								
12	3 085	0000	2466	36479	2458			1539	57								
	51	D 0010	2442	3645	2463	0033205	0033	1535	52								
	ST	0 0020	2382	3643	2480	0031683	0066	1533	39								
12	3 085	0022	2366	36429	2484			1533	36								
	ST		2266	3642	2513	0028566	0096	153									
12			2109	36409	2556			152									
	ST		2012	3638	2580	0022245	0147										
12			1863	36344	2616			152									
	ST		1828	3633	2624	0018165	0197										
12			1792	36312	2631			1519	-								
	ST		1776	3633	2636	0017055	0241	1519									
	51		1747	3635	2646	0016259	0283	1510									
12			1742	36358	2647	2025055		1510									
	51		1727	3636	2651	0015865	0323	1510									
12			1708	36351	2655	0015414	0401	1518									
	51 51		1686	3631	2657	0015414	0478	1510									
1.0			1639	3623	2662	0015091	0418	151									
12			1629	36210	2663	0014724	0553	151	_								
	51		1583	3613	2667	0014726	0552										
12	3 085 51		1522 1465	36034 3594	2674 2679	0013851	0695	1519 1514									
	51			3574	2693	0013671											
12			1324 1286	35686	2697	0012071	0828	1510 1500									
12	51		1115	3546	2712	0010933	0946	1504									
	ST		0922	3525	2730	0009286	1047										
12			0910	35236	2731	0007200	104/	149									
12	5 51		0753	3513	2747	0007633	1131	149									
	51		0633	3506	2758	0006520	1202	149									
12			0629	35058	2758	-300,20	1202	149									
	51		0603	3511	2766	0005863	1264	149									
	ŠĪ		0572	3513	2771	0005409	1320	_									
		_	0552	35136	2774			149									
12	9 000		_	_		0005042	1373										
12	5 51	D 1200	0537	3513	2776	0005042	12/2	1 4 7	20								
12			0537 0496	3513 3510	2778	0003042	1422										
12	51	D 1300						149	25								

303 CK 3503 N    MISSINGA   CAS1   CAS1   MN   MN   MN   MN   MN   MN   MN   M	SID OBS SID OBS SID OBS SID OBS SID OBS SID OBS	DEPTH (m)  DEPTH (m)  0000 0000 0010 0020 0025 0030 0049 0050 0074 0075 0098	2 2 2 2 2 2 2 1 1 1	1	TER TEANS (m) 5	OIR. 18 -4. 46 457 43 41 394	52 19	68 E BARO- AETER (mbs1) 254  T SP A		MP. ℃  WET 8UL8  244 8  244 8  OYN.  x 11  3 000  2 003	14 0 S 0 N. VE	SPEI OBSERV	DIR. 20 CIAL ATIONS	PO4-	2 P to	X1	1 5	NO3-N µg - ot/l	$\rightarrow$	JMBER 1015
MISSENGR   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   INME OF NO.   CAST   CAS	SID OBS SID OBS SID OBS SID OBS SID OBS SID OBS	0000 0000 0010 0020 0025 0030 0049 0050 0074 0075	2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	58 WA COLOR CODE 485 485 482 424 374 262 943 934	364 364 364 366 366 366 366	OIR. 18 -4. 46 457 43 41 394	52 199	BARO- METER (mbs1) 254	AIR TE DRY BULS 250 PECIFIC VOLUNANMALY = X 10 34 35	MP. ℃  WET 8UL8  244 8  244 8  OYN.  x 11  3 000  2 003	0 15 NO. S VE	OBSERV	CIAL ATIONS		Pto	OTAL-P	NO2-N		\$1 O 4 → \$1	
MESSENGA   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   INNE OF NO.   CAST   CAS	SID OBS SID OBS SID OBS SID OBS SID OBS SID OBS	0000 0000 0010 0020 0025 0030 0049 0050 0074 0075	2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	WA COLOR COOE 485 485 482 424 374 262 943 934	364 364 364 366 366 366 366 366	0 R. 18	STEED   STEE	BARO- METER (mbs1) 254	AIR TE DRY BULS 250 PECIFIC VOLUNANMALY = X 10 34 35	MP. ℃  WET 8UL8  244 8  244 8  OYN.  x 11  3 000  2 003	0 15 NO. S VE	OBSERV	CIAL ATIONS		Pto	OTAL-P	NO2-N		\$1 O 4 → \$1	
152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O	SID OBS SID OBS SID OBS SID OBS SID OBS SID OBS	0000 0000 0010 0020 0025 0030 0049 0050 0074 0075	2 2 2 2 2 2 2 1 1 1	COLOR CODE 485 485 482 424 374 262 943 934	364 364 364 366 366 366 366	OIR. 18 *4. *6 457 43 41 394	SIGMA- 2451 2451 2450 2466 2479	0 0	DRY 8UL8 250 ECCIFIC VOLUMNOMALY - X	w£1 cc 8UL8 244 8 244 8 0YN. x 11 3 000 2 003	14 0	OUND LOCITY	A TIDNS							рН
152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O	SID OBS SID OBS SID OBS SID OBS SID OBS SID OBS	0000 0000 0010 0020 0025 0030 0049 0050 0074 0075	2 2 2 2 2 2 2 1 1 1	485 485 482 424 374 262 943 934	364 364 364 366 366 366 366	18 *4. 46 457 43 41 394 37	SIGMA- 2451 2451 2450 2466 2479	(mbs1) 254 -T SP A	8UL8 250 ECIFIC VOLUMNOMALY—X	3 000 2 003	14 0 S 0 VE	0UND LOCITY 5361								рН
152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O	SID OBS SID OBS SID OBS SID OBS SID OBS SID OBS	0000 0000 0010 0020 0025 0030 0049 0050 0074 0075	2 2 2 2 2 2 2 1 1 1	485 485 482 424 374 262 943	364 364 364 365 365 365	*4. 46 457 43 41 394	2451 2451 2450 2466 2479	O O	10 3435	3 000 2 003	O 11	361 361	O 2 mi/l							рН
152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O	SID OBS SID OBS SID OBS SID OBS SID OBS SID OBS	0000 0000 0010 0020 0025 0030 0049 0050 0074 0075	2 2 2 2 2 2 2 1 1 1	485 485 482 424 374 262 943	364 364 364 365 365 365	46 457 43 41 394	2451 2451 2450 2466 2479	0	0 3435	3 000 2 003	O 15	361 361	0; ml/l							рН
152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O 152 O	SID OBS SID OBS SID OBS SID OBS SID OBS SID OBS	0000 0000 0010 0020 0025 0030 0049 0050 0074 0075	2 2 2 2 2 2 2 1 1 1	485 485 482 424 374 262 943	364 364 364 365 365 365	46 457 43 41 394	2451 2451 2450 2466 2479	0	0 3435	3 000 2 003	O 15	361 361	O <sub>2</sub> ml/l							рН
152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0	OBS STD OBS STD OBS STD OBS STD OBS	0000 0010 0020 0025 0030 0049 0050 0074 0075	2 2 2 2 2 2 1 1 1	485 482 424 374 262 943 934	364 364 364 365 365 365	457 43 41 394 37	2451 2450 2466 2479	0	0 3450	3 000	0 19	5361			+					
152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0	OBS STD OBS STD OBS STD OBS STD OBS	0000 0010 0020 0025 0030 0049 0050 0074 0075	2 2 2 2 2 2 1 1 1	485 482 424 374 262 943 934	364 364 364 365 365 365	457 43 41 394 37	2451 2450 2466 2479	0	0 3450	2 003	1	5361			1	J	I	1		
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152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0	STD STO OBS STD OBS STD OBS STD OBS	0010 0020 0025 0030 0049 0050 0074 0075	2 2 2 1 1 1	482 424 374 262 943 934	364 364 361 361	43 41 994 37	2450 2466 2479													
152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0	STD OBS STD OBS STD OBS STD OBS	0020 0025 0030 0049 0050 0074 0075	2 2 1 1 1	424 374 262 943 934	36 36 36 36	41 394 37	2466 2479				4 1:									
152 0 152 0 152 0 152 0 152 0 152 0 152 0 152 0	OBS STD OBS STD OBS STD OBS	0025 0030 0049 0050 0074 0075	2 1 1 1	374 262 943 934	36: 36: 36:	394 37	2479	U	マラコリエ		g 1	5362 5349								
152 0 152 0 152 0 152 0 152 0 152 0 152 0	STD OBS STD OBS STD OBS	0030 0049 0050 0074 0075 0098	2 1 1 1	262 943 934	36 36	37				, 000	-	5338								
152 0 152 0 152 0 152 0 152 0 152 0 152 0	OBS STD OBS STD OBS	0049 0050 0074 0075 0098	1 1 1	943 934	36			0	02882	4 009		5311								
152 0 152 0 152 0 152 0 152 0 152 0	STD OBS STD OBS	0050 0074 0075 0098	1 1 1	934			2593	·				5229								
152 0 152 0 152 0 152 0 152 0 152 0	OBS STD OBS	00 <b>75</b> 00 <b>98</b>	1	783	ס כ		2596	0	02074	8 014		5227								
152 0 152 0 152 0 152 0 152 0 152 0	OBS	0098			36	310	2633				1 5	5188								
152 0 152 0 152 0 152 0 152 0			•	781	36	31	2634	0	01718	8 019	6 1	5187								
152 0 152 0 152 0 152 0 152 0			1	746	36	328	2644				1 1	5181								
152 0 152 0 152 0 152 0 152 0	SID	0100		745	363		2644		01630			5181								
152 0 152 0 152 0 152 0	SID	0125		733	36	-	2648	0	01603	5 027	_	5182								
152 0 152 0 152 0 152 0	OBS	0146		723		348	2651					5182								
152 0 152 0 152 0	STD	0150		721	36		2651	0	01579	8 031		5183								
152 0 152 0 152 0	OBS	T0195		696 693		310	2655 2655	0	01557	5 039		5182 5182								
152 0 152 0 152 0	5T0 5T0	0200 0250		653	36: 36:		2660		01526		_	5177								
152 O 152 O	OBS	0293		608		176	2665	•	01326	2 041		5170								
152 0 152 0	STD	0300		598	36		2666	0	01484	1 054		5168								
152 O	OBS	T0395	_	464	-	913	2677					5138								
152 O	STD	0400		458	35		2678	C	01399	3 069		5137								
152 O	STO	0500	_	327	35	69	2689	0	01309	5 082	9 1	5108								
152 0	OBS	0589	1	187	35	510	2703				1	5073								
152 0	STD	0600		160	35		2706		01162			5065								
	STD	0700		942	35	-	2726	C	00969	7 105		5001								
	OBS	0787		800		117	2739	_			_	4960								
	STD	0800		787	35		2741		000823			4957								
	STD	0900		698	35		2755	C	00688	7 122	_	4940								
	OBS	0982		639		144	2764	_	00000			4930								
	STD	1000		631	35		2764		00604	_	_	4930 49 <b>2</b> 9								
	STD	1100		587 547	35 35		2769 2773		00562 00532			4929								
	STD	1200 11228		537		102	2773		,00332	, 140		4930								
	OBS.	1300		511	35	_	2775	_	00516	4 145		4931								
	OBS	1400		479	35		2775		000512			4934								
152 0	OBS STD STD	1475		457		013	2776			7 170		4937								

IENCE IO. NO.	SHIP CODE	LATITU	DE 1/10	LON	GITUDE	DRIFF	MAS SQI	SDEN JARE	STAT	ION TI		YEAR	CRU	IISE	STATIONS NUMBE		DEPTH TO BOTTON	DEPTE	OB	WAVE SERVATION		WEA- THER CODE	CODE	2	5	NODC "ATION UNBER
	- L	2505	_	0 / 0		1					-	0.0	+				. 204			70.71	1	v 1	0 3			2016
1303	CK	3505	N	046	301 W		113	58 WA			20   I	968	E 1	AIR TE		- 1	4206	16	20	! ! !	1	×1	0 3			0016
									TRANS		SPEED	METE		DRY	WET	CODE	NO.	SPE	CIAL /ATIONS							
								CODE	imi	DIR	FORCE	(mbs		BULB	BUL8	0000	DEPTHS	CBSCK	ra iions							
										21	514	268	В	256	239	8	14									
							1		1		-	1			1	5 ^ D	1			T				-		
Ì	MESSENGE TIME (	U NO.	CAR		O EPTH	(m)	1	T *C	5	*/**	SIGA	A-T		DIFIC VOLU	07	SVN N		CHU	02 ml	PO4-9			NO2=N		S1 O4-Si	pН
	HR 3/10						-		+		+		_			1 10 <sup>3</sup>	-	-			+			PV - 0	-	-
			51		000			482	364		245		00	3446	8 0	000		360								
	126		085		000		_	482	-	429	245		0.0					360								
			ST		001			421	364		246			3296		034		347								
	124		ST		002			342	361		248		UU	3099	9 (	066		329								
	126		0BS		002			286	361	355	250 251		0.0	2809	0 0	095		316 302								
			51		005			992	36;		25			2246		146		242								
	126		085		005		_	983		279	258		00	72240	) (	140		240								
	120		S T		007			843	36		26		0.0	1881	4 0	197		205								
	126		OBS		007			839		294	26							204								
			ST		010			791	36		263		00	1739	4 0	243		195								
	126		OBS		010			789		328	263							194								
			ST		012			772	36		264		00	1679	3 0	285		194								
			ST	Ď	015	0	1	753	36:	37	264	.5	0.0	1636	1 0	327	15	192								
	126		OBS	5	015	1	1	752	36	374	264	6					15	192								
			ST	D	020	0	1	706	363	38	265	7	00	1538	1 0	406	15	187								
	126		OBS	5	T020	0	1	706	36	۹78	265	7					15	187								
			51	D	025	0	1	655	362	28	266	2	00	1509	0 0	482	15	178								
			5 T		030			596	36		266		00	1472	4 (	557		167								
	126		OBS		030			595		166	266							167								
			ST		040		_	453	358		26		00	1396	0 0	700		135								
	126		085		040			451	_	389	267		0.0					135								
			ST	_	050			292	356		269			1268		834		096								
	124		ST OBS		060			122	354	+3 422	270		00	1128	1 (	953		051 050								
	126		51		070			901	35		272		00	0937	5 1	057		985								
			5 T	-	080			744	350		274			0808		144	_	940								
	126		085		T080		-	733		048	274			, , , , , ,	٤ ١			937								
	120		51		090			682	350		279		00	0701	5 1	219		933								
			S T		100			632	35		276			0620		286		930								
	126		085		101			624		126	276		-					930								
			ST		110			591	35		276		00	0575	3 1	345	_	930								
			ST		120		0	552	35	10	27		0.0	0547	3 1	401	14	931								
	126		085	5	T128	8	0	518	350	180	27	14					14	932								
			ST	0	130	0	0	513	350	8	27	4	00	0519	2 1	455	14	932								
			ST		140			474	350		27			0498		506		932								
			5.1		150			436	350		27	-	0.0	00478	4 ]	554	_	933								
	126		OBS	,	T155	6	C	414	350	001	27	19					14	933								

	OOE	LATITUO	1/10	FONGILIDE PAGE	SQU 10"	ARE 1"	1	GMTI GMTI		YEAP	CRUIS ND		STAT NUA	ION	DEP TO BOTT	0	DEPTH OF S'MPL	1 08	WAV SERVA	101		WEA THE	<u>.</u>	CLOUE CODE	5		ON ATZ	
103	CK	3505	N	04800 W	113	58	07 3	30 l	24	1968	E14	4 01	7		420	)6	16	25	$\Box$	1	1	X1		3 5		-		
					[	WA	TER	W	IND	BAR	8D- L	AIR TE	MP.	2	NO				ו' '	- 1	•	1 ^ 1		5 10	1	I	UU	17
						CODE	TRANS	DIR.	FORC S14	ME1 (mb	TER (%)	DRY BULB	81	ET COD	DEPT	S. THS		CIAL /ATIDNS										
ME	SSENCE	CAST					-	24	514	26	8 4	250	2	39 7	14				<u> </u>	_								
- 1	1/10	NO.	C A R C		1	c	5	٠/	SIG	M A - T	SPECIF	MALY-X	JME 10 <sup>7</sup>	₹ △ D DYN. # ¥ 10 <sup>3</sup>	۱. ا	SOU /ELO		O2 ml/		4-P		01AL-1		0 <sub>2</sub> -N	ND3+N µg - at/f	51 Ø4-		рН
		1					1														$\top$		T		-	<del>                                     </del>	-	_
	124		STI OBS			91	364		24		003	444	8	0000	1	53	63		1		,		'		1	1		1
	124		5T(	0000		91	364		24							53												
			ST			1 <i>5 (</i>	364 364		240			320		0034		53												
	124		OBS	0026		104	363		241		003	128	U	0066		53												
			ST			42	363		25		00.2	835	2	0096		53												
			STO			95	363		25			225		0146		53 52												
	124		OBS	0051	19	85	363		25					0170		52												
			5 T (	0075	18	36	363		26		001	824	1	0197		52												
	124		OBS	0078		23	363	50	262	27			-			52												
	12/		STO			72	363		263	37	001	6991	8	0241		51												
	124		OBS STO	0103		67	363		263						1	51	88											
			STE			51	363		264			6374		0283		51												
	124		085	0154		33	363		265		001	5968	8	0323		51												
			5 <b>T</b> (			96	363 363		265							51												
	124		obs	10207		90	363	_	265		100	557]	1	0402		511												
			STO		16		362		266		001	5131	1	0479		511												
			STO	0300	15		361		266			4675		0553		51. 516												
	124	1	OBS	0311	15		361		266		001	701,		0,7,3		516												
			STD	0400	14	45	358		267		001	3864	4	0696		513												
	124		0B 5	T0416	14	21	358	44	268							512												
			STO		12		356		269	4	001	2553	9	0828		509												
			STD		11		354		271	.0	001	1191	ĺ	0947		505												
	124	- (	OBS	0626	10		354		271						15	504	1											
			STO		09		352		272			9433		1050	14	499	93											
	124	,	OBS	70830	07		3508		274		000	8061	l	1137		494												
		,	STD		07 06		3504 350		274		000					193												
			STO		06		3509		275 276			6 <b>9</b> 99		1213		+92												
	124	(	oBs.	1053	05		3509		276		000	6167	'	1279		92												
			STD	1100	05		3510	-	276		000	5744		1220		92												
			STD	1200	05		3509		277		000			1338 1394		192 193												
			STD	1300	05		3509		277	_	000			1448		193												
	124	(	DBS	T1328	05	13	3509	3	277							93												
			STD	1400	048		3507	,	277	7	0009	5030		1499		93												
	124	_	STD	1500	044		3504		277		0004	816		1549		93												
	124	C	BS	T1601	040	06	3498	4	277						_	93												

REFERENCE SH	DE LATER	UDE LO	NGITUDE EUG	MARSDEN SQUARE	STATION IGM		YEAR	CRUISE	STATIC	-	10	MAX DEPTH OF	OB	WAV SERVA			R CODES		1 5	NODC
DE NO.		1/10	1/10 E	10" 1"	MO DAY	HR.1/10		NO.	NUMB		80110M	S'MPL"	DIR	HGT P	ER SE	A COL	E TYPL AW	7		A U M BEb
311303 C	K 3504	4 N 04	4801 W	113 58		129	1968	<del></del>	18		4206	15	27		(	) xe	6 8			0018
					TER TRANS	WIND	BAR METI	0-	TEMP. "C	→i vis.	NO. 1	SPE								
				CODE	Lm I	FORC	E lmb	BULB	801	3	DEPTHS	OBSERA	ATIONS							
					2	7 511	23	7 256	25	7	14					,				
11	SENGR CAST	CARD TYPE	DEPTH (m)	7 %	5 *1	. sig	M A - T	SPECIFIC VO	LUME - x10 <sup>7</sup>	₹ ∆ D DYN, M x 10 <sup>3</sup>	SOUP VELOC		O2 ml/	PO PB	4-P	TOTAL-		NO3=N pg = at/1	5) O4-5)	рН
		SID	0000	2484	3645	24	51	00343	53	0000	153	61		1						
	129	085	0000	2484	3645			00343	,,	,000	153									
	•••	SID	0010	2454	3646	-	60	00334	96	1034										
		STD	0020	2425	3647		70	00326		067										
	129	OBS	0023	2416	3646		72				153	-								
		STD	0030	2298	3646		07	00291	63	0098										
	129	OBS	0045	2086	3643	4 25	64	_			152									
		STD	0050	2025	3641	25	79	00223	59	149	152	53								
	129	085	0068	1865	3636	8 26	17				152	11								
		SID	0075	1840	3638	26	25	00180	90	200	152	05								
	129	OBS	0091	1794	3640	2 26	38				151	95								
		510	0100	1781	3640	26	41	00166	29	243	151	93								
		510	0125	1752	3640		48	00160	35	284										
	129	085	0136	1742	3639		50				151									
		STD	0150	1737	3639		51	00158	43	324										
	129	085	T0182	1721	36371			00155	• •		151									
		STD	0200	1709	3636		55	00155		1403										
		SID	0250	1664	3628		60	00152	95	480										
	129	085	0274	1637	36234		-	001/0			151									
	1 10	SID	0300	1597	3616		66	00148	19	)555										
	129	085 STD	T0366 0400	1500 1463	3599°		76 79	00138	92	699	151									
		STO	0500	1338	3574	26		00138		1833										
	129	085	0559	1252	35632			00129	, -	,0,5	150									
	167	SID	0600	1173	3554	27		00114	34	955										
		STD	0700	0995	3534	27		00098		1061										
	129	OBS	0755	0904	35252			50070	-	1	149									
•		SID	0800	0823	3519	27		00082	92	1152	_									
		STD	0900	0680	3509	_	54	00069		229										
	129	085	0950	0628	35069	_					149	-								
	-	STD	1000	0618	3511	_	64	00060	78	1294	-									
:		STO	1100	0592	3515		70	00055		352										
:			T1198	0560	35168						149									
	129	085	11130																	
	129	085 STD	1200	0559	3517	27	76	00050	82	1405	149	35								
	129				3517 3512		76 77	00050		1405 1456										
	129	STD	1200	0559		27			19		149	35								

EFERENC	- SH		TITUDE		LONGI	TUDE	DRIFT	AM OZ	SDEN	STA	TION T	IME	YEAR		ORIG	NATO		$\Box$	DEPTH TO	DEPT	н		WAVE RVATI	ONS	WE		CODES			NOD	IC.
DE NO			1,	/10		1/10	۵ <u>۲</u>	10*	1*	MO	DAY	(R,1/10			10'	TATZ			BOTTOM	S'MPL			4GT PE		1 00	20	TYPE AMI	-		STATI	
31130	3 CK	35	03 1	N C	480	)4 W		113				170 1	968	E					4023	14		07		2			8 3			00	19
									WA	_	+	SPEED	BA		AIR T			vis	NO.	5 P	ECIAL										
									COLOR	TRAN!	OIR.	OR	M E I		DRY BULB		JLB	CODE	OBS. DEPTHS	OBSER											
											04	515	27	0	250	2	28	8	14			$\neg$									
	M111	NGR CA	.,	CARD			_		,	1		1		Ť		- 1		_	_		Τ					T	-				_
	HR 1	E OF NO		TYPE		DEPTH I	lm)	1	TC	2	*/	SIGM	A-T		CIFIC VOI		DY	Δ. M.	. VEL	UND	02	m1/1	PO4		FOTA L- 19 - 01		102-N	NO3-N vg = at/l	SI O4-		pН
	PER	/10			+			-		+		+	_	+				10,	-		-		-	-		+		pg = 0//1	Pg - 0	-	_
				STD	,	0000	1	۱ ,	459	36	<b>5</b> O	246	2	1	03332		١	00	1,5				ļ							1	
	1	70	(	085	,	0000			459		496	246		01	0 3 3 3 4	. 1	00	00		355 355											
	-		`	STC	)	001			376	36		248		0.0	3129	7	00	32		337											
				STO		0020			293	36		250			02920			63		318											
	1	70	(	)BS		002	2	2	276	36	427	251				-	• •	-		314											
				STD	)	0030	)	2	210	36	43	252	9	0(	270	8	00	91		298											
	1	70	(	)BS		004	3	2	103	36	422	255	9							273											
				STO	)	0050	)	2	034	36	38	257	4	0.0	2280	) 5	01	40		255											
	1	70	(	)B5		006			919	36	344	260	2						152	225											
	_			STO	)	007		_	877	36	-	261		00	1909	6	01	93	15	216											
	1	70	(	BS.		0086			837		384	262							152	206											
				SIC		0100			795	36		263			1725		02		15	196											
	1	7.0	,	STD	)	012			742	36		264		00	01623	37	02	80		185											
	1	70	(	)BS STD		0128			738		338	264		•						184											
	1	70	,	510 85		0150			729	36	_	264		00	1599	8	03	20	15												
		, 0		STD		0170			720 716	36	348	265 265			1592		٠.			186											
				STD		0250			689	36	_	265			1562		04		151												
	1	70	(	85		0251			683		311	265		00	1202	. 0	04	17	151												
	-		•	STD		0300			628	36		266		0.0	1515	. 0	05	<b>.</b> .	151	188											
	1	70	0	BS		0347			566		106	266		00	,,,,,		0,	96	151												
				STD		0400			495	35		267		0.0	1420	12	07	nα	151												
				STD		0500			350	35		269			1305		08		151												
	1	70	0	B5		0522	2	1	316	35	709	269				-	••	-	151												
				SID		0600	)		185	35	55	270		00	1158	9	09	62	150												
				STD	)	0700	)	1	018	35	36	272	2		1013		10		150												
	1	70	C	)BS	T	0706	5	1	8 00	35	354	272	3				_			27											
				SID		080		0	823	35	18	274	0	00	0836	5	11	63	149	972											
				510		0900			683	35		275		00	0708	8	12	41	149	933											
	1	70	C	B 5		0900			683		982	275	-						149	933											
				SID		1000			652	35		276			0628		13		149												
		7.0	_	SID		1100			615	35		277		00	0558	8	13	67	149	_											
	1	70	C	85		1156			593		198	277							149												
				STD		1200			574	35	_	277			0521		14		149	_											
				SID		1300			528	35		277			0500		14		149												
	1	70	_	STD BS		1400			477 467	350		277		U(	0473	8	15	21	149												
	1	, ,	·	03	,	1416	,	0	46 /	221	081	278	U						149	/33											

REFERENCE SHIP		-5	MARSDEN SQUARE	STATION TIN		DRIGINATI	DR'S	OFFIH I	MAX. EPTH		WAVE	WEA	CLOUD			NODC
CODE ND. CODE	TITUDE LO	NGITUDE ES		MD DAY HR	1/10		TION MBER	BO 170 W	OF _		RVATIONS	CODE	TYPE AN			NOITAT
311303 CK 35		802 W		08 04 1		E14 020				07		) X1	6 7		_   ,	0020
. 312303, Cit ( 33			WAI		INO BAS	A ID TEALD		NO.			1 ,	9   11	10.7	1	1	0020
			COLOR	TRANS. DIR.	SPEED MET	ER DRY V	VET COD	000	SPECIA ESERVATI	DNS						
				<del>   </del>	S11 25	-	28	13		_						
				100	311 27	1	<del></del>				-					
MESSENGR CATTIME OF NO	ST CARD TYPE	DEPTH (m)	1 %	s */.	SIG M A -T	ANOMALY-X102	₹ △ D DYN. M X 10 <sup>3</sup>	. AFFOCI.		m1/I	PD4-P ug = 01/6	101At-P ug - 61/1	NO2-N	NO3-N	St O4~Si µg = ot/l	pН
		2222						1								
164	STD	0000	2460	3650	2462	00 33 32 1	0000	1535								
154	OBS STD	0000 0010	2460 2321	36500 3643	2462 2498	0029936	0032	1535 1532								
	STD	0010	2200	3639	2529	0029936	0060	1529								
154	OBS	0022	2178	36387	2535	002070	0000	1528								
• •	STO	0030	2092	3639	2559	0024152	0086									
154	OBS	0042	1994	36400	2586			1524								
	STD	0050	1965	3641	2595	0020845	0131	1523								
154	OBS	0063	1916	36431	2609			1522	5							
	STD	0075	1863	3643	2623	0018267	0180	1521	2							
154	085	0083	1834	36550	26390											
	STD	0100	1804	3643	2638	0016934	0224	1520								
154	OBS	0124	1774	36435	2645			1519								
	STD	0125	1774	3644	2646	0016260	0265	1519								
154	STD OBS	0150 70165	1763 1756	3644	2648	0016088	0305	1519								
154	STD	0200	1737	36442 3641	2650 2652	0015867	0385	1519 1519								
	STD	0250	1709	3636	2655	0015776	0464	1519								
154	085	0250	1709	36356	2655	0017770	0704	1519								
• • • •	STD	0300	1683	3631	2658	0015676	0543									
154	OBS	T0329	1660	36271	2660		02.3	1519								
	STD	0400	1561	3609	2669	0014842	0696	1517								
	STD	0500	1407	3584	2684	0013646	0838	1513								
154	OBS	0501	1405	35834	2684			1513	6							
	SID	0600	1225	3558	2701	0012140	0967	1508								
154	085	T0662	1120	35450	2711			1506	_							
	STD	0700	1049	3540	2720	0010399	1080	1504	_							
	SID	0800	0883	3529	2739	0008539	1174	1499								
	STD	0900 1000	0745 0636	3520 3513	2753	0007163	1253	1495								
154	OBS	T1090	0562	35090	2763 2769	0006192	1320	1493								
194	STD	11090	0555	35090	2770	0005463	1378	1491 1491								
	STO	1200	0503	3509	2776	0004894	1430	1491								
	STD	1300	0479	3508	2779	0004708	1478	1491								
154	085	T1352	0478	35080	2779	0004700	1-470	1492								

Table 4X.—Observed and interpolated oceanographic data for stations taken by USCGC SEBAGO at Ocean Station ECHO, 5-27 August 1968, prepared from NODC listing No. 31-1311

CTM	ID, NO.	SHIP	LATIFUI	- 1		GITUDE	Dairt	MAR! SOU	ARE		IG M	(T)		Y E A R	CRUIS NO.		STATIO	N		DEPTH TO OTTOM	MAX. DEPTH OF	OBSI	WAVE ERVAT	10.45	WE.	R	CLOUD CODES			NODC STATION NUMBER
COC	NO.	+		1/10		1/10	1	10*	1.	MO	DAY	HR.	710		NO.	-	MUMBI		+		S'MPL"S	DIR.	HGT PI	_	`	-		-		
315	1311	55	3505	N	048	01 W		113		0.8	05			1968	E19	00			4	160	15	14		1	X ]	i i	8   3			0001
									WA	TER		WIN		BAR		AIR TE	MP. °C	VI	.	NO.	SPEC	TAL								
									COLOR	TRAF		IR	SPEED OR	M ETE (mbs		DRY BULB	W E 1 BUL	CO	DA	OBS. DEPTHS	OBSERV									
									CODE	-	-		FORCE	+	-	_			+											
										Ļ	1	8 5	08	230	) 4	83	250	5 7		14			,			_				
		MESSENG	CAST	CAR	0	DEPTH	(- )	,	*C		s •/.		51/54	A A - T		ic volt	IME	₹ A I	D	SOU		0 z mi/l	PO.	4-8	TOTAL-	- P	NO2-N	NO3-N	SI 04~	Si pH
		HR 1/10	S NO.	TYP	E	DUTTE	1015			1	, ,		3101		ANO	WALY-X	10.	x 10		VELC	CITY	0,	νų.	1/10	µg - 01	4	µg = ot∕l	µg - a1/1	μg - α1	И <b>Р</b>
			-											-																
		1	1	51	D	000	0	٠,	527	31	548		244	40	00	3538	3 '	000	0	153	371 (		1				'		1	
		15	7	OBS		000			527		548	4	240				_			153										
		* -		51		001			525	_	548		244		00	3536	6	003	5	153										
				51		002			481		548		245			3413		007		153										
		15	7	0B 9		002			434		648		246							153										
				51		003		2	366	3	648		248	8 8	00	3091	2	010	3	153	338									
				51		005	0	2	087	3 (	644		256	54	00.	2373	6	115	7	152	270									
		15	7	089	5	005	1	2	076	30	643	G	256	57						152	267									
				51	0.1	007	5	1	877	3	540		26	16	0.0	1887	5	150	1	152	216									
		15	7	08.9	5	007	7	1	866	3	639	1	26	19						152	213									
				51	ſρ	010	0	1	808	3	643		26	36	00	1707	9	25	6	152	201									
		15	7	OBS	ŝ	010	1	1	806	3	642	8	26	3.7						152	200									
				51	0	012	5	1	782	3	644		264	43		1647		029	7	151	197									
				SI	D	015	0	1	761	3	645		26		00	1599	7	033	8	151										
		15	7	OBS		015			760	3	644	7	26							151										
				51	D	020		1	733		641		26		00	1577	4	041	7	151										
		15	7	QB 5		1020			73∩		640		26							151										
				51		025		_	<b>7</b> 07		636		26			1570		049		151										
				51	-	030		_	666		628		26		00	1550	4	057	4	151										
		15		083		030			666		628		26							15										
		15	7	OBS		T039			536		606		26							15										
				5]		040		_	534		606		26			1446		072		15										
				51		050			401		584		26		00	1352	1	086	4	15										
		15	7	OBS		1059		_	250		563		27						_	150										
				5]		060			246		563		27			1218		099		150										
			_	51		070			050		540		27		00	1041	1	110	5	150										
		15	1	083		079			887		524	-	27		0.0	200-	2		2	149										
				51		080			876		523		27			3886		120			993									
		1.5	7	S	-	090			715	_	514		27		00	0714		128	2		946									
		15	1	083		1099			605		508 509		27		0.0	0606	1	134	0	149	918 919									
				5		100			604				_	_				-			-									
				5	TD.	110			576 545		510 512		27			0567		140		149	929 929									
		1.5	7	-							_				00	0523	)	146	1											
		15	1	08	S TD	126			525 512		513 512		27 27		00	0488	5	151	2		931 932									
					רטי To	140			477		509		27			0473		156 156			934									
					TD	150			440		504		27			0473		160			935									
			7	OB:		T153			428		501		27		00	07	~	100	,		935									

REFERENCE	SHIP	LATITU	DE	LONGITUD	DRUFT	MAR	SDEN ARE	STATI	ON TI	M.E	YEAR			'ROTAP			DEPTH TO	MAX. DEPTH	O.F	W A	VE A TIDNS	W	EA-	CLOUD			NODC
ODE NO.	CDOE		1/10		1/10	10"	1.			R.1/10	TEAK	CRU	D.	STATIO NUMB		80	OFFO	DF S'MPL'S			PER S		DE	TYPE A 4			UMBER
311311	55	3502	N	04800	w	113	58				1968	E1	15 00			4	206	16	23	1	2	x	1	6 6			0002
							CDLDR	-	DIR.	/IND	BAR		DRY	MP. C	- VI6	. ]	NO. 085.	SPE	CIAL ATIONS								
							CDDE	lm1		FORC		-	BULB	BUL	8	10	/CFIES										
		. 1		-		-			27	513	20	1	257	24	-	_	14			1			_				
	MESSENGE TIME HR 1/10	CAST ND.	CAR		TH (m)	T	*C	S	·/	SIG	M A -T	SPEC	OFFIC VOL	107	₹ Δ C DYN, A x 10 <sup>3</sup>	й. —	VELD		02 ml/		04~P	TOTAL up - 0		NO2-N ug = 01/1	ND3-N µg - of 1	\$1 04-51 ug - 611	pН
		1 1	ST	n 00	000	,	502	364	8	24	48	0.0	3466	0	0000	)	153	65		- 1							
	139	9	085		000		502	364		24			,,,,,,				153										
			5 T	0 00	010	2	403	364	4	24	74	00	3216	5	0033	3	153	43									
			5 T	0 00	020	2	310	364	1	24	99		2981		0064		153										
	139	9	OB 5	0.0	28	2	239	363	99	25	19						153	05									
			ST	0 00	30	2	222	364	0	25	24	00	2752	9	0093	3	153	01									
			S T	D 00	050	2	061	364	0	25	68	0.0	2335	3	0144	4	152	62									
	139	9	085	0.0	054	2	032	364	00	25	76						152	55									
			5 T	-	75		886	364		26		00	1894	2	0197	7	152										
	139	9	085		81		856	364		26							152										
			ST		100		803	364		26		00	1714	9	0242	2	151										
	139	9	085		107	_	788	363		26							151										
			5 T		125		779	364		26			1658		0284		151										
		_	ST		150	_	766	364		26		00	1616	5	0325	5	151										
	139	9	OBS		159		761	364		26							151										
		_	ST	-	200		737	364		26		00	1572	2	0405	5	151										
	139	,	OBS		212		730	364		26						_	151										
			ST		250		719	363		26			1576		0483		151										
		,	ST		300	_	687	363		26		UC	1562	3	0562	2	151										
	139	•	OBS		312	_	676	363		26		0.0	11.7.	-			151	_									
			ST		400		560	361		26		U	1474	1	0714	•	151										
	139	7	OBS ST		410 500	_	546 409	360 358		26 26		0.0	1361	,	0856	,	151 151										
			5 T		500	_	242	356		27			1225		0985		150										
	139	9	085		522		203	355		27		00	11225	2	0.70.	,	150										
	10.	,	ST		700		026	353		27		0.0	1020	7	1097	,	150										
			ST		900		844	352		27			00855		1191		149										
	139	•	OBS		327		804	351		27		-	, 0000		11/	•	149										
		-	ST		900		729	351		27		0.0	00714	4	1270	)	149										
			ST		000		643	351		27			0601		1335		149										
	139	9	OBS		139		615	351		27		-					149										
			ST		100		589	351		27		0.0	00543	2	1393	3	149										
			ST		200		548	351		27			00512		1445		149										
			ST		300		509	351		27			00491		1496		149										
	139	9	OBS		309	0	506	351	07	27							149										
			5 T	D 14	400	0	472	350	8	27	79	00	00473	5	1544	4	149	32									
			ST	D 19	500	0	437	350	4	27	80	00	0465	2	1591	1	149	34									
	139	3	OBS	T 1 4	579	0	410	350	02	27	80						149	35									

	SHIP	LATITU	DE	TONGITUDE POS	MARS SOU	ARE	STATION TO		YEAR	ORIG CRUISE NO.	STATIC NUME	)N	DEPTH TO BOTTOM	DEPTH OF S'MPL*	003	WAVE ERVATION HGT FEE		WEA- THER CODE	CLOUD COOES	ī	5	NOOC STATION NUMBER
11311	\$5	3503	$N \mid 0$	04803 W	113			30 1	968	E15 0	3		3200	15	32	1 2		X 1	8 2			0003
					[	WAT		SPEED	BARO.	-	EMP. T	- VIS	NO.	SPE	CIAL							
						COLOR	TRANS. OIR.	OR	METER (mbs)		BUI	T COD	OBS. OEPTHS	OBSERV	ARONS							
					1		06	508	234	272	22	8 7	14									
[	RESSENGR				T				1		_		4		!	T	Т	_				
- 1	IIME D	NO.	CARO TYPE	OEPTH (m)	1	*C	5 *4.	SIGM	A-T	SPICIFIC VOI		₹ △ D DYN, M x 10 <sup>3</sup>	. VELO	DCITY	02 m1/1	PO4-P		0 TAL-P	NO <sub>2</sub> -N μg ~ αl/l	NO3-N µg - al/l	51 O4-51 1/10 - 84	
ľ	IR 1/10				+			-					+			-	+-	-	-		-	+
I	ı	l	STO	0000	24	86	3650	245		00 3409	. 1	0000	153	262		1					l	
	130		085	0000		86	36503	245		00 340.		0000	153									
			STO	0010		337	3646	249		003016	5 5	0032										
			510			217	3643	252	7	00271		0061	152									
	130		085	0026		159	36423	254					152									
			STO			141	3642	254		002519		0087										
	120		STO			39	3643	257		002260	9	0135	152									
	130		085 5TD	0052		)27 168	36425	257		0010.			152									
	130		085	0075	_	860	3643 36428	262 262		00184	1.7	0186										
	130		510			331	3650	263		001709		0230	152									
	130		085	0103		127	36508	263		00170	, 2	0230	152 152									
	•••		STO			302	3648	264		001664	.0	0273	152									
			STO			81	3645	264		001646		0314	152									
	130		085	0154	17	778	36441	264					152									
			510		17	62	3646	2650	0 (	001609	0	0395	152	204								
	130		085	T0208		58	36462	265					152	204								
			STO			37	3641	265		001603		0476	152									
	130		ST0			01	3633	265		001594	6	0556	152									
	130		510	0308		94	36320	2656		001400			152									
	130		085	T0410		81	3617 36148	2668 2669		001499	י כי	0710	151									
	150		STO			29	3588	268		001381	7	0854	151									
			STO			54	3563	2699		001361		0985	151 150									
	130		085	10611		34	35602	270		~~1234	٠ .	0700	150									
			STO			153	3541	272		001039	8	1099	150									
			STO			74	3524	273		000875	-	1195	149									
	130		280	0816	0.8	48	35222	2739					149									
			STD			11	3514	275	3 (	000708	13	1274	149									
			510			94	3508	2764		000595	5	1339	149									
	130		085	T1009		86	35079	276					149									
			STO			69	3510	2769		000562	-	1397	149									
	130		STO	1200		45	3511	2773		000527	9	1451	149									
	130		085 5T0	1273 1300		25 17	35126 3512	277		200405			149									
			510			84	3510	2777		000495 000475		1503	149									
							3505	2780		000479		1551	149									
			STD	1500	04							1599										

REFE	RENC	CE						- =	MAR	SDEN	STAT	ION 1	IIME			() RI	GINAT	2,80	DEPT		MAX.		WA	V E	WE	A -	CLOUD			NDDC
TRY	10		CODE	LATITU	DE	LON	GITUDE	DP1FT	sou	ARE		GMT		YEAR	CRU			TION	#0 #0110		OF DEPTH		SERV	A TIDNS	TH	nr L	CODES		5	MOITAT
ODE	N	0.	-	•	1/10		1/10	- X	10°	1.	CM	YAC	HR.1/10		N	0.	NU	MBER	60110	5 m	'MPL'S	DIR	HGT	PER SE	LA CO	01	TTPL AM	7	"	UMBER
31	13	11	55	3502	N	04	759 W		113	57	08 6	8	131	1968	E 1	15 6	004		429	5	15	0.2	1	4	X:	ı	8 5	1		0004
-										WAT	ER	_ `	WIND	BAI	10.	A IR	TEMP	21V 2	NO.	.	SPEC	IAI.	1							
										COLOR	TRANS	DIR.	SPEE	D ME1	ER	DRY		VET COD	DEPTH	D SH	BSERVA	TIONS								
										CODE	(m)	-	FORC	t ime	$\rightarrow$	BUL	-+-	ULB	-	-										
												14	508	22	4	25]	7 2	24 7	14				<u>L</u>							
		-	MESSENGR	CAST	CA	RD	DEPTH		Ι.	℃	1	·4.		MA-I	SPEC	CIFIC V	OLUME	₹ ∆ D		NUO	D	0 2 m1/l	,   ,	01	TOTAL	-+	NO2-N	NO3-N	SI O4-SI	
			TIME 0 HR 1/10	T ND.	TY	PE	DEFIN	(m)	1 '	C	,		210	, MA-1	AN	OMAL	Y-X107	x 10 <sup>3</sup>	, A	ELOC	PTY	Q 2 mizi	'   P	g = o1/I	µg - 01	7 1	ug = at/l	μg = α1/1	µg - α1/1	pH
		F	,		-				+						1								_			_				
		- 1		1	۱ ۲	TD	000	n	٠ 2	455	364	. 3	24	58	00	336	589	0000	11	535	4		ì		1			1	1	r
			131		OB:		000			455		29		58						535										
						ĪD	001			416	364			68	00	32	729	0033	15	534	6									
					5	TD	002	0	2	355	364	0	24	85	00	311	154	0065	15	533	3									
			131		OB:		002	5	2	316	363	90	24	96						532										
						T D	003			252	363			15		283		0095		530										
						TD	005			037	364			75	00	22	737	0146		525										
			131		OB:		005		_	028		00		77						525										
						TD	007			866	364			20	00	185	5/2	0198		521										
			131		OB:	5 Tn	007			861 795	364	97		21	00	169	24.0	0242		521 519										
			131		OB:		010			793		00		38	00	110:	900	0242		519										
			191			TD .	012			765	364			45	0.0	163	224	0284		519										
						TD	015			744	364			50		158		0324		519										
			131		08:		015		_	743		05		51						519	90									
					S	TD	020	0	1	725	36	39	26	54	0.0	15	704	0403	1 5	519	2									
			131		08	5	020	2	1	724	361	393	26	54					1 '	519	2									
					S	ΤD	025	0	1	698	36	34		56		156		0481		519										
						TO	030			660	36			60	00	154	439	0559		518										
			131		OB		030	-	_	657		267		61						518										
						TD	040		_	550	360			71	00	146	5 7 2	0710		516										
			131		08:		T040			545		74		72	00	112	(20	0063		516										
						T 0	050			417	358			84 701		)136 )12]		0851		514 509										
			131		08:	T D	060			253 246		40		01	00	12	1 / 6	0.480		509 509										
			151			o TD	070			014	35:			722	ดก	101	140	1092		502	-									
					_	TD	080			832	35			38		089	_	1185		497										
			131		08:	-	080			826		61		138	- 4					497										
						TD	090			733	35			153	00	07	169	1264		495										
					5	TD	100	0	0	654	35	9	2.7	65	00	060	32	1330	14	494	0									
			131		OB:	S	100	5	0	651		89		166					_	493										
						TD	110			606	35			70		056		1388		493										
						TD	120			562	35			74	0.0	052	249	1443		493										
			131		OB:		125			538		35		76						493										
						TO	130			520	35		_	177		049		1494		493										
						TO.	140			482	350		_	778		0048		1543		493	-									
			121			TD	150			446	350	_	_	778	u C	048	946	1592		493										
			131		08:	3	T152	9	O	438	350	122	21	778					14	493										

NCE ID.	SHIP	LATITU	DE	LON	GITUDE	MA NA	RSDEN UARE	STATION 11	ME	CRUIS		ATION	1 1	PTH DEP	TH D	WAVE BSERVATION	S   TI	EA+	CLOUD		5	NODC
NO.	CDDE	•	1/10		1/10	2 10°	1.	MO DAY H	R.1/10	NO.		UMBER	BOT	TOM S'ME		HGT PER	SEA CI	DDE	TYPE A M		\	NUMBER —
311	55	3502	N	٥4.	758 W	113	3 57	08 09 1	31 1968	E15	005		92	06 1	5 21	2 4	l x	1	8 5			0005
J I I	37	J J U Z		0.4		1			(INID		AIR TEN	P. 'C	T N	-		١, , ,		•	0 ,		,	
							caro	R TRANS. DIR.	SPEED ME	TER	DRY	WET CO	5.	BS. Care	PECIAL RVATIONS	s						
							CODE		FORCE [m	bs)	BULB	BULB	DE	PTHS								
								22	515 17	79 2	74	254	1	4								
	A ESSENCE	CAST					_		T	(1)(0.1)	IC VOLUA	. E A	рΤ	SOUND	7	/ PO4-P	TOTA		NO- N	ND3-N	5104-5	
- 1	TIME	or ND.	CAR	E I	DEPTH I	n 1	ı,c	5 %.	SIGMA-T		MALY-RIO		м.	VELOCITY	0 2 m1	/I   PO 1= P			NO3-N	vg - at/1	ид ~ at.	pΗ
-	HR 1/10	+	-			-			+	+			,		+	-	-	+		_		+
						. 1		1				1	_ 1								Į.	
			51		0000		2447	3642	2460	003	13516	000		15352								
	131	l	083		0000		2447	36421	2460	00.7	2522	003		15352								
			51		0010		2443	3641	2460 2474		3522			15352 15342								
	13	1	085		0020		2392 2384	3640 36396	2477	003	32182	006	-	15342								
	19.		51		0030		2243	3640	2518	00.2	8091	009		15306								
	13:	1	085		0045		2056	36404	2570	002	.5071	00,		15260								
	• • •	•	SI		0050		2011	3639	2581	00.2	2148	014		15249								
	133	1	08		0070		1876	36374	2615			-		15215								
	• • •	-	S		0075		1859	3639	2621	001	8475	019		15211								
	13	1	OBS	_	0096		1802	36430	2638					15198								
		=	51	t o	0100	)	1796	3643	2639	001	6766	024	2	15197								
			51	r D	0125	,	1763	3641	2646	001	6220	028	3	15192								
	13	1	083	5	0144	•	1746	36406	2650					15190								
			S.	10	0150	)	1744	3641	2650	001	5897	032		15190								
	13	I	OB:		T0188		1731	36396	2653					15192								
				מז	0200		1730	3639	2652		5864			15194								
		_	_	T D	0250		1712	3636	2654	001	5853	048		15196								
	13	1	08		0282		1690	36333	2658			05/		15195								
	1.0	,		TO.	0300		1670	3630	2660	001	15450	056		15191 15174								
	13	1	OB:	o TD	0374		1580 1548	36141 3608	2669 2671	00.1	14628	071		15168								
				TD.	0500		1406	3585	2685		13553			15136								
	13	1	OB:		0564		1300	35697	2695	301		, 000	_	15110								
		•		To	0600		1215	3558	2703	001	11946	097		15086								
				ŤĎ	0700		1009	3533	2721		10198			15026								
	13	1	0B:	-	0755		0915	35242	2730					15000								
				TD	0800		0855	3523	2739	000	851	7 118	3	14985								
			S	ΤD	0900	)	0743	3522	2755		6986		1	14958								
	13	1	08	S	1095	2	0695	35213	2761					14948								
			S	ΤD	1000		0672	3521	2764		06138			14947								
			-	ΤD	1100		0626	3520	2770		15654			14946								
		_		T D	1200		0580	3520	2775	000	05164	143	Q	14944								
	13	1	OB:		122		0568	35195	2777				_	14943								
				TD	1300		0535	3517	2779		04843			14942								
			-	TO	1400		0492	3512	2780		04720			14940								
			_	TO	1500		0449	3505	2779	000	04742	2 158	4	14939								
	13	1	08	5	1509	4	0445	35046	2780					14938								

REFERE	ENCE					LE MA	RSDEN	STATION T	IME	-	OPIG	NATO	8,2	DEPTH	DEPTH		WAVE	A 8 A -				1001	
CTRY	ID.	SHIP	LATITU	DE	LONGITUDE	12 5	UARE	(GMT)		YEAR	CRUISE	STAT		TO MOTTOB	OF	. 00:	SER VATIONS		DE.			AT N	
CODE	NO.			1/10	1/10	= 10	1.	MO DAY H	(R,1/10)		NO	forc. A	* BER		Z'MPL	S CHL	HGT PER S	14	177 20	+ -	4-		
311	311	55	3502	N C	04800 W	11	3 58	08 10	139 1	968	E15 00	06		4297	13	16	0 3	X.1			(	006	
							WA	TER	VIND	BARG	O- AIR 7	EMP.	TC VIS	NO.	SPF	CIAL							
							COLOR	ALC SHARE	SPEED	A4 ET E			VET CODE	OBS.		ZATIONS							
							CODE		FORCE	lmbs	-	-											
								16	506	19	3 264	2	41	14									
		MESSENGR		CARD	DEPTH	(m)	1 °C	5 *	SIGM	A - T	SPECIFIC VO	LUME	₹ A D DYN, M		CNU	O2 mb l	PO 4-9	TOTALER	NO <sub>2</sub> -N	NO3-N	5 14-5		5
		TIME 6	4 NO.	TYPE	DEFIN	017			310 m		ANOMALY.	110	E 103	. VELC	CITY	Cy mai	14 - 11	eg - eld	μg - σ1 -	µg − at +	µg = of +	pН	Ċ
													1				-	1					-
	1		1	STO	000	0 '	2478	3646	245	3	00341	55	0000	153	359								
		139	)	OBS	000		2478	36455	245						359								
				ST	001	0	2463	3645	245	7	003380	9	0034	153	357								
				SIC	002	0	2448	3644	246	1	00 334	90	0068	153	355								
		139	1	OBS	002	2	2445	36436	246	1				153	355								
				STO	003	0	2294	3641	250	4	00294	13	0099	153	319								
		139	•	OBS	004	5	2072	36362	256					152									
				ST			2022	3635	257		00227	16	0151	152									
		139	)	OBS	006		1892	36330	260						218								
				ST			1859	3635	261		00187	55	0203		210								
		139	)	OBS	008		1812	36387	263						200								
				ST			1796	3639	263		00170	_	0248		197								
				STO			1767	3641	264		00163	50	0290		193								
		139	'	OBS	013		1759 1752	36409 3641	264 264		00160	. 0	0330		192 192								
		139	,	STO	015 <sup>1</sup> 017 <sup>1</sup>		1740	36412	265		00160	40	0,550		192								
		137	<b>'</b>	ST			1735	3640	265		00158	02	0410		195								
				STO			1712	3637	265		00157		0489		197								
		139	)	OBS	026		1700	36347	265		00131				195								
		•		STO			1666	3629	266		00154	31	0567		190								
		139	)	OBS	1035	4	1606	36191	266	7				153	179								
				ST			1555	3609	267		00147	10	0718	153	170								
				STO	050	0	1423	3586	268	2	00138	36	0860	15	142								
		139	)	OBS	T052		1380	35798	268						132								
				ST			1258	3561	269		00125	67	0992		101								
		139	)	OBS	069		1084	35405	271		00100				054								
				STO			1079	3540	271		00109		1110		052								
		120		STO			0870	3525	273		00086	1 /	1208		991								
		139	,	OBS	T087		0762	35174	274		00074	7 2	1200		960								
				ST(			0749 0699	3517 3517	275 275		00074		1288		960 957								
		139	,	085	109		0647	35166	276		90000	0 0	1009		953								
		137	•	570			0645	3517	276		00062	13	1424		953								
				ST			0586	3514	2 <b>7</b> 7		00057		1484		945								
				ST			0522	3510	277		00051		1538	_	936								
		139	9	OBS	T133		0502	35095	277			_		_	932								
														-									

ENCE			т			-T .:		/#. NO.: 7:		ORIGIN	229014		MAX.	WANE		- CLOUS	1	-	
ID.	ZHIP	LATITUO	DE	LONG	GITUDE	S NOCTE	ARSDEN BRAUC	STATION TI	YEAR		TATION	10		WAVE BSERVATIONS	WEA-	CDOES		51	NOOC
NO.	CODE	•	1/10		1/10	Z 10		MO DAY H	3,1/10		NUMBER	BOTTOM	MPL'S DIE	HGT PER SEA	CODE	TYPE AM	1	N	UMBER
1311	55	3502	N	047	58 W	11	3 57	08 11 1	32 1968	E15 00	7	4206	14 17	1 3	×1	8 2		(	0007
							WA	TER W	IND BAR	O- AIR TE		NO.	SPECIAL	]					
							COLOR	TRANS. OIR.	OR MET		WET COD	OBS. O	BSERVATIONS	6					
							CODE	1	FORCE (MB		BULB			4					
								2.2	510 20	3 296	270 7	14		1					
	MESSENGR TIME		CAR		OEPTH Im	1	r *c	s ·/	SIGMA-T	SPECIFIC VOLU	A)   UTN. N	SOUN			1014 ( - P	NO2-N	NO3-N	5104-5	рН
	HR 1/10	NO.	TYP	1						ANDMACI-A	x 10 <sup>3</sup>	. AFFOC	1114	ν <b>ο •</b> ο1/1	µg + ot/l	µg = at/L	ug - 01/1	yg - 01/	
			51	ď	0000		2495	3644	2446	003476	6 0000	1536	53						
	132		085	5	0000		2495	36440	2446			1536	53						
			51		0010		2469	3642	2453	003419									
			51	-	0020		2402	3640	2471	003246	5 0068								
	132		085		0022		2384	36399	2477	002000		1534							
	122		51 085		0030		2250 2056	3640	2516 2569	002830	2 0098								
	132		51		0045		2011	363 <b>94</b> 3639	2581	002214	8 0149	1526 1524							
	132		085	-	0068		1901	36389	2610	002214	0 014,	1522							
	102		51		0075		1896	3638	2610	001944	7 0201								
	132	!	085		0090		1878	36369	2614			1521							
			51	D	0100		1841	3639	2625	001812	9 0248	1521	10						
			51	D	0125		1772	3642	2645	001635	8 0291	1519	94						
	132	•	085		0135		1754	36431	2650			1519	91						
			51		0150		1750	3642	2650	001592	8 0331								
	132	!	OBS		T0181		1739	36405	2652			1519							
			51		0200		1731	3639	2652	001587									
	100		51	-	0250		1704	3635	2656	001570	4 0490								
	132		OB 5		0269 030u		1692 1672	36325 3629	2657 2659	001556	8 0568	1519 1519							
	132	,	085		10357		1623	36204	2664	001336	0 0,00	1518							
	152		51		0400		1566	3610	2669	001488	0 0720								
			51	-	0500		1415	3585	2683	001374									
	132	•	085	_	0531		1363	35773	2688			1512							
			51	ď	0600		1219	3557	2701	001209	6 0992								
			51	T D	0700		1032	3535	2719	001045	9 1105	1503	35						
	132	?	083	5	0709		1016	35332	2720			1503	30						
			51	I D	0800		0865	3523	2737	000868	1 1201	1498	8 8						
	132	?	085		T0892		0746	35170	2751			1495	_						
			51		0900		0740	3517	2752	000730									
			S		1000		0668	3517	2762	000637	-								
			51		1100		0607	3517	2770	000561	8 1409								
	132		085		1127		0592	35162	2771	000511		1493							
			51	-	1200		0556	3515	2775 2 <b>7</b> 77	000516	-		-						
	132	)	085		1300 11369		0517	3512 35094	2777	000495	5 1513								
	132		083	9	11309		0470	17074	2118			1493	31						

CE Sun				-	≝ MAR	SDEN	STATIO	AIT NO	A.E			ORIG1N	A TO	)R*S	DEPTH	MAX	. 1	WAVE		WEA-	CLOUD			1000
CODE	LATITUD		LON	GITUDE 3	2	ARE		MTI		YEAR	CRUIS	E 5	TAT	ION	80110	OF.	-	SERVATI		CODE			S N	LATION
).		1/10		1/10	= 10.	1,	MO DA	AY HR	1/10		NO.	- 7	4 U M	ABER	-	S'MPL	S DIR	HGT PE	R SEA	-	TIPE AM	-		
11 55	3502	N	04	758 W	113	57	08 1.	2 1	47 ]	968	E 15	00	8_		4206	15	23	2 3		X 1	8 4	+	(	8000
						WA	TER	W	NO	BAR	o-	AIR TE	M.P.	°C VIS	NO.	SPE	ECIAL							
						COLOR	TRANS.	DIR.	SPEED	MET (mb		DRY BULB		VET CO		OBCERN	VATIONS							
						COUR			FORCE		_	-	-		+	1		-						
								21	516	22	4 3	100	2	70 6	14	1								
MESSENGR	CAST	CAR	ı D	DEPTH im	,   ,	*C	5 .	./	SIGN	4.4	SPECIFI	ic valu	ME	₹ ∆ t	S	DUND	O 2 ml/	, PO.	_P 1	TOTAL-P	NO2-N	NO3-N	SI O 4-Si	рН
HR 1/10	NO.	TYP	'E	DEFIN IM	'     '		,		31014	14-1	ANDA	MALY-XI	0	x 10 <sup>3</sup>	VE	FOCILA	02 11.17	, ha -	01/1	µg = at/l	µg - 01/1	µg - 01/1	yg + 01/1	) PA
1111	++				_																			
	1	51	r n	0000	,	494	364	3	244	. 6	ใกกล	3478	7	0000	1 1 5	363			1		t		1	1
147	,	085		0000		494	364		244		003	710	,	0000		363								
1-7	'	51		0010		353	364		248		003	3082	8	0033		331								
		51		0020	_	239	364	_	252			772		0062		304								
147	7	089		0025		192	364	-	253				_			293								
	,	51		0030		168	364		254		002	593	2	0089		287								
147	7	OBS		0049		062	364	01	256	8					15	262								
		51	D	0050	2	054	364	0	257	70	002	317	3	0138	1 1 5	260								
147	7	083	5	0072	1	903	363	67	260	8					15	222								
		51	D	0075	1	889	363	7	261	1 1	001	934	8	019	1 15	219								
147	7	085	5	0099	1	799	364	05	263	37						198								
		\$1	٥٦	0100		798	364		263			695		053.		198								
		51	D	0125		770	364		264		001	638	4	0278		194								
147	7	085		0146		753	364		264				_			192								
		51		0150		752	364		264		001	604	8	0319		192								
147	7	OBS		T0197		734	364		265				_			195								
			T D	0200		732	364		265			1582		0398		195								
		51	_	0250		701	363		265		001	570	r	047		193								
14	•	OBS	s Fp	0292		669 663	362 362		265		001	550	0	055		5190 5189								
14	,	08		10387		579	361		266		001	. ) 50	0	0)).		176								
1.4	'		r r	0400		565	361		266		001	485	R	070		173								
			TD	0500		434	358		268			1385		085		5146								
14	7	OB S		T0581		305	357		269							115								
• •	•		Īρ	0600		258	356		270		001	1227	6	098		101								
			TD	0700		039	353		27	19	001	1043	9	1095	5 19	038								
14	7	OB S		0775		907	352	41	273	31					15	5000								
		S	T D	0800	0	875	352	4	273	37		877		119		992								
		5	TD	0900		760	352		275		000	725	0	127		4965								
14	7	OB 5		T0971		694	352		276							951								
			TD	1000		678	352		276			626		133		4949								
			ΤO	1100		623	351		276			571		139		4944								
	_		T D	1200		573	351		27		000	0523	1	145		4941								
14	7	08		1242		553	351		27		000		_			4939								
			TD	1300		526	351		27			0486	_	150	_	4938								
			TD	1400		484	351		27			0475 0476		155		4937 4937								
14	,	_	1 D	1500		445	350 350		27		000	J416	Ţ	158		4937								
14		OB:	٥	T1527	C	450	300	20	21	17					1.	7731								

REFERENCE SHIP	ATITUOE	LONG	SITUDE 5	MAR SOU		STATION	TIME	YEAR	CRUISE	ORIGINA	TOR'S		DEPTH	MAX. DEPTH OF	OBSE	WAVE RVATION:		R CO			ST	OOC
	1/10		1/10	ž 10.	11.		HR.1/10		NO.		JAABER		MOTTOM	S'MPL"S	DIR.	HGT PER S	EA CO	TYPE	AMT		NI	JMBER
311311 55 3	502 N	0/48	00 W	113		08 13	135	1968	E ) 5	nna			4114	18	23	2 3	x:	8	3		0	009
2112111 22   2	302 N	048	00 W	1113	WA		WIND	1	-	AIR TEM	P. °C	7	NO.			2   3	1 ^ .		2 1		1 0	
					COLOR	T	SPEF	BAR MET	U	DRY	WET	VIS.	OBS.	OBSERV								
					CODE	TRANS. OI	R, OP			IULB	BULB		OBS. DEPTHS	00324								
						2	2 513	23	4 2	64	253	7	14									
									T		.   5	- A n	1				T					
MESSENGR TIME OF	NO. TY		DEPTH Im	) Т	*C	5 %	. sid	I-AME	ANON	C VOLUM	,	Δ 0 YN. M X 10 <sup>3</sup>	. SOL	CITY	O 2 ml/l	PO4=P µg = 01/1	TOTAL-				SI O4-51 µg = at/1	p 5-
HR 1/10		-				+			-			X 10"	+			-	+	+	-	+	-	
		_		_					000							1					ļ	
		I D	0000	_	490	3643		+47	003	4721	0	000										
135	08		0000		490	3642		447	002	3003	^	034	153 153									
		T D T D	0010		421 335	3641 3640		∙67 ∙91		2893 0581	_	066										
135	0 <b>B</b>		0020		266	3638		510	003	0 7 6 1	U	000	153									
155		T D	0030		218	3638		524	00.2	7544	0	095										
		TD	0050		967	3635		90		1300		143										
135	OB		0053		940	3635		597		1,000	Ü	• • •		229								
137		TD	0075		828	3635		525	001	8020	0	193										
135	08		0080		812	3635		529					151									
• • • •		TD	0100	1	789	3642	26	540	001	6673	0	236	15:	195								
135	ОВ		0107	1	782	3643	7 26	543					15	194								
	\$	ΤD	0125	1	763	3641	26	546	001	6220	0	277	15	192								
	S	T D	0150	1	744	3639		549	001	6006	0	317										
135	08		0161		738	3638		550						190								
		ΤD	0200		737	3639		551	001	5983	0	397										
135	08		T0221		731	3639		553						198								
		TD	0250		712	3636		555		5817		477										
		TD	0300	_	672	3629		559	001	5568	0	555										
135	08		0327		646	3624		561	001		_	707		188								
		TO	0400		560	3609		569	001	4820	U	70 <b>7</b>										
135	OB		0443 0500		502 404	3599 3583		575 584	00.1	3656	0	850		159								
		TD TD	0600		233	3559		700		2222		979										
135	0B		T0676		105	3543		712	001	2222	0	,,,		058								
133		10	0700		053	3539		718	001	0544	. 1	093										
		TD	0800		868	3523		737		8730		189		990								
		ΤD	0900		731	3514		751		7387		270		953								
135	ов		0905		725	3513		751			_			951								
		TD	1000		670	3515		760	000	6526	1	339	14	946								
	S	TD	1100	0	615	3517	2	769	000	5734	1	401	149	941								
135	08	S	T1133	0	598	3517	6 2	772					14	939								
	\$	TD	1200	0	560	3515	2	774		5221		455		935								
		TD	1300		510	3510		776		5004	_	507		931								
		TD	1400		470	3507	_	779	000	4781	1	555		931								
135	08		1446		454	3505		779						932								
		TD	1500		438	3504		780		4665		603		934								
		TO	1750		397	3498	_	779	000	477€	1	721		958								
135	ОВ	5	T1765	0	396	3497	8 Z	779					14	960								

		1					1	-					_					T						_	-	
	ENCE	SHIP	LATITU	DE	LONGITUD	1 1	M AR	SDEN I ARE	STATI	IT NC	AA E	YEAR	_	RIGINA		-	DEPTH	DEPTH	OR	WAVE SERVATIO	NS	WEA-	CLOUD			NO TO N
CTRY	NO.	CODE	•	1/10	1.	10.3	10"	1 1*	MO D		8,1/10		CRUISE NO.		UMBER.		BOTTOM	OF S'MPL"		HGT PEP		CODE	TIPE AM	7		TATION UMBER
31	1311	55	3500	N	04757	W	113	57	08 1	4 2	18 1	968	E15	010	)		4206	16	27	1 4		×1	8 3			0010
								WA			IND	BAR		IR TEA			NO.	-	CIAL				. 0 .5			010
								COLOR	TRANS.	DIR.	SPEED OR	AN ETT	ER D	PY LB	W ET BULB	CODE	OBS. DEPTHS	OBSERV	ATIONS							
								-		25	FORCE 50.7	+	$\rightarrow$	-	253	7	14	-								
			1 1						4	25	T	21	1 2	4		_	14					-				
		MESSENGR	CAST OF NO.	CAR		H (m)	1	°C	5	4.	SIGN	1 A - T	SPECIFIC		Ąŧ δγ	A. D.	SOU VELO		0 2 ml/	PO4=		DTAL-P		NO3-N	\$1 O4-\$1 pg = a1/1	рН
		HR 1/10	-						+		-				X	103				-		- U. I	ng - at-	µg = a1/1	pg - 01/1	
		1		51		00	2	524	363	7	243	12	0034	101	100	0.0	163	4.0								
		218	1	089		00		524 524	363		243		0036	101	0.0	00	153 153									
		2.1	,	SI		10		379	363	_	247		0031	962	0.0	34	153									
				\$1		20	_	244	363		251		0028			64	153									
		218	1	085		26		168	363		253				-		152									
				SI	0 00	30	2	111	363	5	255		0024	863	0.0	91	152									
				5.1	0 00	50	1	899	363	4	260	7	0019	721	0.1	35	152	17								
		218	1	085		52	_	884	363		261						152	13								
				51		75	_	807	364		263		0017	157	01	81	151									
		218		085		78		800	364		263						151									
				51		0.0		773	363		264		0016	492	0.2	23	151									
		218	1	085		04	-	769	363	_	264		0016				151									
				5 T 5 T		25 50		767 762	364 364		264 264		0016 0016			65	151									
		218	ı	089		57		760	364		264		0016	303	03	05	151 151									
		210	'	51		00		741	364		265		0016	011	0.3	86	151									
		218	ı	085				735	364		265		0010	.011	0,5	00	151									
				51		50		706	363		265		0015	823	04	66	151									
				5.1	0 03	00	1	663	362	7	265	9	0015	508	05	44	151									
		218	l	085	03	15	1	649	362	40	266	0					151	87								
				51		00	1	553	360	8	267	0	0014	738	0.6	95	151	69								
		218	1	085				528	360		267						151	64								
				51		00		406	358		268		0013			36	151									
				51		00	_	245	356		270		0012	021	0.9	64	150									
		218	1	085				202	355	_	270		001-			٠.	150									
				5 T 5 T		00		058	354		272		0010			76	150									
		218	1	085		00 34		888 836	352 351		273 273		0009	061	11	74	149									
		210	,	51		00		739	351		275		0007	7.27	1.3	56	149 149									
				5 T		00		624	351		276		0006		-	24	149									
		218	ı	085	_			586	350		276		3000	200	1 -	_ ¬	149									
		210		ST		00		568	350		276		0005	631	13	84	149									
				ST		00		536	350		277		0005		_	38	149									
				ST		00		504	350		277		0004			90	149									
		218	Į.	085	13	11	0	500	350	91	277	7			-		149									
				5 T		00	0	471	350	7	277	9	0004	795	15	39	149	31								
				SĪ	0 15	00	0	439	350	3	277	19	0004	752	15	87	149	134								
		218		085				411	349		277					-		-								

										MAY.			-	ī			
REFERENCE	SHIP LATIT	upe to	NGITUDE EN	MARSDEN	STATION TIA (GMT)	VE AR	ORIGIN		DEPTH	DEPTH	085	WAVE ERVATIONS	WEA-	CLOUD			NDDC TATION
CODE NO.	CODE	1/10	NGITUDE HON		MD   DAY HR			TATION LUMBER	BOTTON	S'MPL'S		HIGH PER SE	CODE		-	1 1	UMBER
311311	1 55 350	2 N 04	756 W	113 57	08 15 1	98 1968	E15 01	1	4297	14	28	2 4	X1	3 3			0011
				WAT	TER W	INO BAI	AIR TE	AP. °C	NO.		CIAL						
				COLOR	TRANS DIR.	SPEED MET	ER DRY	WET CO	DEPTHS	OBSERV							
				CODE	I	FORCE (mt				-							
					21	513 21	0 275	251 7	14	1 ,		_	1				1
	MESSENGE CAST		OEPTH (m)	1 °C	s ./	SIGMA-T	SPECIFIC VOLU		M 100	UNO	O 2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	SI O4-S	
	HR 1/10 NO.	TYPE					ANOMALT-XI	x 10	3 VEL	00111		υ <b>g - α1/</b> Ι	νg - α1/1	Ng - at/	yg - ot/l	yg - 01/	
														İ			
		SID	0000	2518	3636	2434	003599	000	0 15	368							
	198	OBS	0000	2518	36362	2434				368							
		STD	0010	2363	3640	2483	003132			333							
	198	STD OBS	0020 00 <b>22</b>	2220 2193	3642 36424	2526 2534	002728	006		299 293							
	170	STD	0022	2193	3640	2565	002361	3 008		263							
	198	085	0044	1925	36392	2604	002361	000		224							
	1,0	STD	0050	1900	3642	2612	001916	013		219							
	198	nBs	0067	1845	36481	2631				207							
		STD	0075	1832	3648	2634	0017166	017		204							
	198	OBS	0088	1813	36481	2639			15	201							
		STD	0100	1804	3648	2641	001657	021		200							
		STD	0125	1786	3648	2646	001622	026		199							
	198	OBS	0132	1781	36485	2647				199							
	100	STD	0150	1778	3648	2648	001615	030	0 15	201							
	198	OBS STD	0177 0200	1760	36472 3645	2650	0016116	038	1 16	203							
		STD	0250	1729	3639	2653	0015116		-	202							
	198	OBS	0263	1719	36373	2654	00100	. 0.70		201							
		STD	0300	1686	3632	2658	001567	054		196							
	198	085	T0347	1633	36235	2664			15	187							
		STD	0400	1543	3606	2671	001466			166							
		STD	0500	1372	3576	2685	001350	083		124							
	198	OBS	T0516	1345	35722	2688	001201			117							
	198	STD OBS	0600 0683	1196 1057	355 <b>2</b> 353 <b>7</b> 4	2702 2716	001201	7 096		078 041							
	190	510	0700	1028	3535	2720	0010388	3 107		033							
		STD	0800	0870	3525	2738	000861			991							
	198	OBS	T0864	0784	35197	2747				968							
	_	STD	0900	0742	3518	2752	000726	124		957							
		SID	1000	0640	3514	2763	000617	3 131-	4 14	934							
		STD	1100	0562	3510	2770	000548	137		919							
	198	OBS	1108	0557	35099	2771				918							
		STO	1200	0507	3508	2775	000499	-		913							
	100	STD	1300	0476	3506	2777	0004829	9 147		916							
	198	OBS	T1367	0468	35051	2777			14	924							

NCE	T						MARS	OEN I	SYAT	ION TI	446		Ι.	NIG	NATO	2'9		MAX		346.0.3	/E			010	110				7
10.	CODE	LATITU	OE	LO	NGITUOE		SOUA		31 A	IGMT)	mt	YEAR	CRUISE	*	STAT		DEPTH	DEPTH	.	WA.	v e L TIONS		WEA-	CFO			5	NODE	
NO.	CODE	•	1/10		1/10	° Z	10*	1.	MO	DAY H	8,1/10		NO.		NUM	BER	BOTTO	M S'MPL	S DIR	нат	PER S	۱ ۸	008	TYPE	- 1			UMBER	1
311	55	3502	N	04	800 W	1	13	58	08	16 1	42	968	E15	0 1	2		4206	15	22	4	4		K1	8	3		-	0012	1
	- 1							WA		_	INO	1	1		EMP.	*c	NO.	T'		1 ,	- 1	, ,	•	, 0	- 1		,	3012	i
							-	COLOR	TRANS.	DIR.	SPEED	- BARC METE	) <del>-</del>	ORY	_	ET COC	ORS.	OBCERN	CIAL VATIONS										
							- 1	CODE	lm i	DIK.	OR FORCE	Imbe	) 9	ULB	BL	JLB	DEPTH	\$											
										21	522	186	5 2	63	24	48 7	14												
[,	MESSENGR	CAST	CAI						1			<u> </u>	SPECIFIC			<b>₹</b> △ 0		DUND		1.	D4-P								_
- 1	TIME : HR 1/10	NO.	TYI		OEPTH 0	71	Т	,C	5	٠/	SIGA	4A-T	ANOM			X 10 <sup>3</sup>	A.	LOCITY	02 ml/		- a1/l	TOTA		NO 2-		03-N 3-01/I	\$1 O 4=\$1  yg = at/	ρН	
ŀ	1/10	+				+			+							_ ^	+					-	-		+				_
			١ .	τp	0000	, 1	24	58	363	. 1	244	ا ۵	003			2000		262		-					!			1	
	142	,	OB:		0000			58	363		244		003	+04		0000		353											
	142	-		TD	0010			45	363		248		003	110	۱ ۵	0033		328											
				Tο	0020			32	364	-	252		002			0062		302											
	142	2	OB:	-	0022			09	364		252		,			5002		297											
				D	0030			01	364		255		002	416	9	0088		270											
	142	?	OB:	5	0045	,	19	45	364	49	260	3						231											
			S.	TD	0050	)	19	12	364	٠6	261	. 2	001	917	0	0132	15	222											
	142	2	OB:	5	0066		18	32	364	86	263	15					15	203											
				D	0075			09	364	٠7	263	9	001	669	7	0176	15	197											
	142	2	08		0089			83	364	_	264							192											
			S.		0100			81	364		264		001			0218		193											
			S.	_	0125		_	74	364		264		001	502	8.	0258		195											
	142	•	OB:	ľρ	0134 0150			71 67	364 364		264		001	. 0 =	^	^ 200		196											
	142	,	OBS		0180		1,	01	364		20:		001	777	U	0298	15	198											
	142	•	S		0200		17	44	364		265	. 2	001		2	0377	16	199											
				ΙĎ	0250			07	363		269		001			0456		195											
	142	,	OB:		0284			73	362		265				-	0.30		190											
			<b>S</b> 1		0300			51	362		266		001	530	7	0534		185											
	142	?	OB 9	5	10390		15	26	360	44	267	4						159											
			S1	O	0400		15	12	360	2	261	5	0014	+27	9	0681	15	156											
			SI	-	0500			68	357	8	268	17	001	327	5	0819	15	123											
	142	!	OBS		T0586			30	355		270							089											
			51		0600			00	355	-	270		001			0945		080											
			51		0700			02	353		272		000	992	9	1053		024											
	142		OBS	-	0791			50	352		273		000					981											
			51 51	-	0800			36	352		274		0000			1145		977											
	142	,	OBS		10995			02 04	351 351		275		0000	98 /	4	1222		942 918											
	1-2		51		1000		06		351		276		000	. 70	я	1285		918											
			51		1100			47	351		277		000			1340		912											
			51		1200			00	350		277		000			1391		910											
	142	!	OBS		1226			89	350		277				•			910											
	_		51		1300			60	350		277	-	0004	61	2	1438		910											
			51		1400			26	350		278		0004			1484	_	912											
							04			95																			

SHIP	LATITO		ONGITUOE SOUTIONO.	MARSOEN	STATION TO	YE	AR C	RUISE	STATION	-	OEPTH TO BOTTOM	MAX. OEPTH OF	1	WAVE ERVATIONS	500	R COOF	5	S	NOOC TATION
	ļ.	1/10	1/10	10, 1,	MO DAY H	R.1/10	_	NO.	NUMBER	_	BOILOW	S'MPL'S	Dit.	HGT PER S	EA COC	TYPE A A	NT .	^	OWRE
55	3501	LN O	4801 W	113 58	08 17 1	38 19	68	E 15 01	3		4251	41	23	2 4	X1	5 6			0013
				WA			BARO-		MP. °C	VIS.	NO.	SPE	:IAL						
				COLOR	TRANS. DIR.	SPEED OR FORCE	(mba)	ORY BULB	WET	CODI	OBS. OEPTHS	OBSERV	ATIONS						
				1000	27		149	242	224		20								
					21	303	147	242			<del></del>		1					,	
MESSEN TIME	GRICAST	CARO	DEPTH (m)	1 °C	s ·/	SIGMA	_,   s	PECIFIC VOL	JME \$	AN O	sou	ONL	O 2 ml/l	PO <sub>4</sub> -P	IOTAL-		NO3-N		p+
MR 1/		TYPE	34		' ''	3101111		ANOMALY-X	107	x 103	, AETO	CITY	02 11111	µg • e1/l	μg - α1/	1   µg - al/l	µg - œ1∕1	µg - a1/1	"
															1		1		1
	,	STD	0000	2440	3628	2451	١,	003432	4 0	000	153	348		1	1	'	1	1	'
13	38	085	0000	2440	36281	2451					153								
		STD	0010	2431	3630	2455	(	003396	8 0	034	153								
		STD	0020	2422	3632	2460	(	00 3360		068	153								
13	38	08.5	0023	2419	36322	2460					153	348							
		SID	0030	2272	3633	2504	(	002942	2 0	099	153	313							
13	38	085	0048	1987	36333	2583					152								
		STO	0050	1968	3634	2589		002142	7 0	150	152								
13	38	085	0071	1822	36362	2628					151	199							
		STD	0075	1812	3637	2631	(	001749	4 0	199	151	197							
13	38	085	0095	1772	36381	2642						189							
		510	0100	1768	3638	2643	(	001645	4 0	241	151	189							
		STD	0125	1746	3639	2648	(	001599	6 0	282	151	186							
13	38	085	0143	1731	36389	2652					151	185							
		STD	0150	1725	3638	2653	(	001563	7 0	321	151	184							
13	38	085	T0193	1690	36316	2656					151	180							
		STD	0200	1687	3631	2657	(	001543	7 0	399	151	180							
		STO	0250	1657	3627	2661	(	001520	8 0	476	151	179							
13	38	085	0285	1628	36228	2664					151	175							
		STO	0300	1610	3619	2666	(	001489	1 0	551	157	172							
13	38	085	10373	1522	36039	2674					151	155							
		STD		1500	3600	2676		001416		696									
		STO		1385	3584	2689		001318	9 0	833	151	129							
1:	38	085	T0562	1290	35720	2699					151								
		STO		1198	3560	2708		001147		956	150								
		SID		0987	3534	2726		000974	0 1	062		018							
13	38	085	0737	0920	35274	2732						799							
		STO		0826	3521	2742		000819		152									
		STO		0699	3513	2754		000697	5 1	228		940							
13	38	085	T0916	0681	35123	2756						936							
		5 10		0630	3511	2762		000627		294	149								
		STO		0576	3509	2767		000577	_	354	149								
		STO		0528	3507	2772		000536		410	149	-							
		STO		0487	3505	2775		000505		462									
	2.0	STO		0452	3503	2778		000482	1 1	512		923							
L.	38	085	T1402	0451	35031	2778						923							
		STO		0433	3502	2779		000474	-	559		932							
, ,	70	5 T D 08 S	1750 T1940	03 <b>95</b> 03 <b>7</b> 2	3500 34983	2781 2782		000460	3 1	676									
	70	ST0		0368	3498	2782		000458	7 1	791		980							
1.	70	085	2445	0336	34972	2785		000456	7 1	191	150								
	70	510			3497	_		000453		010	_								
, ,	70			0332 0 <b>29</b> 7	3497	2785		000452	4 2	019	150								
1	70	085	T2941 3000	0297	34961	2788		000433	7 ~	34.0		119							
1 .	70	510 08 <b>5</b>	T3448	0292	3496	2788		000432	, 2	240									
	70 70	085	3946	0238	34929	2789					151	191 267							
¥	, ,	510			34905	2789		000029		471									
1	7.0	085	4062	0232 0231	34903	2789		000428	- 2	671	152								
1	70 70	085	74104	0231							152								
3.5				0231	34900	2789	,				152	74							

REFEREN	CE I					1		orn.										-											
TRY I	10.	COOE	LATITU	OE	LONGITUDE	Delift INOCTe	MAR! SQU	ARE		ION T		rear.		ORIGIN			DEPTH		AX PTH	000	WAY		WEA		000			NOOC	
ODE N	NO.	2002	•	1/10	11/10	O Z	10*	110	MOT	DAY	18,1/10		CRUIS NO.		STATIC NUMB		10	0	OF LPL'S			TIONS	COD	c l	ODES		i	STATIO	Ni
3113	311	55	3458	N	04759 W		113	47			138 1	968	FIF	01			4206		5	23		PIR SE	`-	11793	A M	-	-+		-
								WA	TER		WIND	BARC		AIR TE			T NO	1		-	1 1	4	X1	1 6	2	ı		001	4
								COLOR	TRANS	DIR.	SPEED	METE	R	DRY	WE		.280	0.00	SPECI	AL TIONS									
									-	2.0	FORCE	(mbs	-	BULB	BUL		DEPTH	2											
	г		_						_	23	508	179	2	96	24	2 7	14												
	_ [′	MESSENGR TIME (	CAST NO.	CAR		m)	1	*c	s	• /	SIGMA	1 -T	SPECIFI	c vocu	3 14	₹ A 0	50	DUND			PC	)4-P	TOTAL-F	NO:	_ N	NO1-N	5104-5		-
	- 1	HR 1,10			·						1		ANOR	ALT-E	0'	x 10 <sup>3</sup>		LOCITY	'   '	) 2 m l/l		- 61/1	µg = 01/1			μg - σ1/l	yg - at		4
					_																							+	_
		120		ST				23	36]		244:		003	511	4	0000	15	342			1			1	-		1	1	
		138		085				23	361		244						15	342											
				5 T 5 T				346	362		2476			200.	_	0034		327											
		138		08.5				258	363	_	250		002	903	7	064		308											
		100		ST				219	363		252		00-					299											
		138		085				33	363 363		2541		002	5 70	9	091		278											
		• 5 0		ST				27	363		2596 2598		003	051	,			226											
		138		085				119	363		2628		002	054	0	138		225											
				ST				112	363		2630		00 <b>1</b>	7610	٠ ،	185		199											
		138		085				52	363		2645		001	761	,	1100		197 183											
				ST	D 0100	)		50	363		2645		001	619	3 (	228		183											
				ST	D 0125	,	1.7	30	363		2650			582		268		181											
		138		085	0147	,	17	11	363	57	2655							179											
				ST	0150	)	17	0.8	363	5	2655		001	5462	, (	307		179											
		138		085	T0197	•	16	64	362	76	2660							172											
				ST			16	62	362	7	2660	)	001	5158	3 (	383		172											
				ST				24	362		2664	•	001	4899	9 (	458		168											
		138		085	0295			84	361		2669	)					15	163											
		120		ST				79	361		2669		001	456	5 (	532	15	162											
		138		OBS	T0390			85	359		2678						15	145											
				STI				72	359		2678			3928		675		142											
		138		STI				34	357		2691		001	2873	3 (	809		111											
		100		STI	70591 0600		11		355		2705							076											
				STI			09	72	355 353		2707			1487		930		070											
		138		0B\$	0786		0.8		351		2726 2739		000	9678	, ]	036		014											
				ST			0.8		351		2742		200				_	974											
				570			06		351		2757			8164 5739		125		969											
		138		085	10974		06		351		2765		500	ל כונ	,	200		938											
		_		ST			06		351		2766		20.00	5867	, ,	263		923 923											
				ST			0.5		351		2770			5509		320	14												
				ST			0.5		351		2775			5129		373	149												
		138		085	1232		05		351		2776			/	•			927											
				ST			05	01	351	0	2777		000	879	) ]	423	149												
				SI	1400		04	62	350	6	2779			744	-	471		927											
		138		OBS	T1480		04	30	350	0.9	2778				•			927											

				-						r - r	MAX.					_		
REFERENC	SHIP	LATITUD	E LO	NGITUDE BOOKET	MARSDEN SQUARE	STATION	IME YEAR	CRUISE	STATION	DEPTH	DEPTH		WAVE ERVATIONS	THER	CLOUD		5.1	ATION
CODE NO			1/10	1/10 2	10° 1°	MO DAY		NO.	NUMBER	2022011	S'MPL'S	DIR	HGT PER SE	CODE	TYPE A.M	7	NI	UMBER
3113	11 55	3502	N 04	800 W	113 56	08 19	135 1966	E15 0	15	4252	13	22	2 4	X1	5 6		О	015
						VATER	WIND BA	RO- AIR 1	EMP. C	NO,	SPEC	IAI						
					COL		SPEED ME		WET CO		DBSERVA							
					-	23	520 14	-	238 6	14								
						1 123	1020 12		7.0									
	MESSENGE	약 NO.	CARD	DEPTH (m)	1 %	5 %.	SIGMA-1	SPECIFIC VO		W. WELOS		0 g ml/l	PO4-P ug - 01/I	TOTAL-P	NO2-N µg - 01/I	NO3-N ug - ot/l	\$1 O4-\$1   pg = at/1	pН
	HR 1/10	+			-				X 10		-				-	-		
			sTp	0000	2409	3615	2451	00343	55 0000	1534	40					l	1	
	135	5	OBS	0000	2409		2451	00343	, 0000	1534								
	• • • • • • • • • • • • • • • • • • • •	•	STD	0010	2401		2453	00 341	67 0034									
			SID	0020	2393	3616	2456	00339	79 006	3 153:	39							
	135	5	OBS	0023	2391		2456			153								
			STD	0030	2181		2523	00275	77 0099									
	135	5	085	0040	1969		2587			1523								
	120		STD	0050	1931		2597	00205	80 014									
	135	,	085 STD	0063 0075	1879 1808		2612 2631	00174	71 0199	1521 1519								
	135		OBS	0084	1770		2641	00174	/1 019	151								
	10.	•	SID	0100	174		2647	00160	80 023									
	135	5	OBS	0124	171		2654			151								
			SID	0125	1716	3636	2654	00154	90 027	5 151	77							
			STD	0150	1691		2657	00152	18 0319									
	139	5	OBS	T0162	1680		2659			151								
			SID	0200	1660		2661	00150	40 039									
	135	•	OBS	0245 0250	1624 1618		2665 2665	00147	CE 0/.61	1516								
			STD	0300	1559		2671	00143										
	135	5	085	70316	1538		2674	0014)	<b>42</b> 000	1519								
	•	-	SID	0400	1414		2685	00132	88 067		-							
	135	5	085	0448	1342	35766	2692			151	06							
			SID	0500	127:		2698	00122	37 080									
	135	5	085	0575	1144		2710			150								
			510	0600	107		2718	00103										
		_	STD	0700	0839		2741	00080	81 100									
	135	,	085	10715 0800	0806 0713		2744 2755	00067	22 100	1499 3 1490								
			STD	0900	0624		2765	00058	_	_								
	135	5	085	0962	058		2769	00000	05 1140	149								
	• 5.	-	STD	1000	055		2771	00052	17 120									
			STD	1100	051		2776	00047										
			SID	1200	0489	3509	2778	00046	75 129	8 149	05							
	135	5	085	T1287	048	7 35084	2778			149	19							

ICE	Eulin				- :	MAP	SDEN	TATE	ION TH	ME	_	0	RIGINAT	OR'S	DEPTH	MAY		WAVE	- 1	WEA-	CLOUD			NODC
ID.	CODE	LATITU		LONG	GITUDE 🖹	a san	ARE	-{	G M(T)		YEAR	CRUISE		FION	TO 80110	OF		SERVATION		THER	CODES		S	TATION
NO.			1/10		1/10	10*	1.1.	40 D	AY H	1,1.10		NO.	NU	WBE	1 301101	" S'MPL"	SOB	HGT FE₽	SEA		1171 AW		-+	- J m = [ =
311	\$5	3502	N	048	100 W	113					968	E15			4252	14	33	1 3		X 1	6 2	-		0016
							WA	_	W	SPEED	BAP	J	R TEASP	VIS	NO. 085	SPE	CIAL							
							COLOR	TRANS.	DIR.	OR FORCE	M ET			WET COL	DEPTH	OBSERV	2 NOIT A							
							_		32	518	18		3	210 7	14	+								
ſ							l	+		1	10	- 120						1	1				1	
- 1	MESSENGR TIME	U NO.	CAR		DEPTH (m)	T	*C	\$	*/	SIGN	T— A	SPECIFIC ANOMA		DIN, I	A SC	OCITY	02 ml	PO4-1		TALEF	NO1-N	ИО3−И	\$104-5	рн
	HR 1/10			-		-		-						x 10 <sup>3</sup>	- 1			µ₽ * 01	, ,	9 - 01/1	ug = al/1	yg - a1/1	µg - 01	<b>\</b>
		1 1						1										1						
			51		0000		414	362		245		0034	195	0000		341								
	137	,	085		0000		414	361		245		0000		0.00		341								
			51 51		0010		325 230	362 363		248		0031		0063		322 300								
	137	7	085	_	0024		190	363		252		0028	~ 21	000.		291								
			51		0030		117	363		254		0025	381	0089		273								
	137	7	OBS		0046		950	363		259						231								
			51	D	0050	1	912	363	1	260	1	0020	242	0139	-	221								
	137	7	085	5	0068	1	789	363	23	263	3				15	189								
			51	O	0075	1	774	363	5	263	9	0016	741	0181	15	186								
	137	7	085		0090		746	363		264						180								
			51	-	0100		733	363		265		0015		0222		178								
			51	-	0125	_	704	363		265		0015	577	0261		173								
	137	,	0BS		0135		694	363		265		0015	300	0300		172								
	137	,	OBS		0150 0179		681 657	362 362		265 266		0015	280	0300		170								
	1,5		51		0200		644	362		266		0014	AQA	0375		167								
			51		0250		605	361		266		0014		0449		162								
	137	7	085	_	0267		589	361		266						159								
			51		0300	1	551	360	6	266	9	0014	530	0522	15	152								
	137	7	085	5	T0357	1	485	359	30	267	4				15	139								
			5 1		0400		450	359		267		0013		0664		135								
		_	51		0500		330	357	-	269		0012	646	0796		110								
	137	1	085		T0536		274	356		269						096								
			51	-	0600		126	354		270		0011		0916		053								
	137	,	51 085	-	0700 0705		929 920	351 351		272		0009	419	1022		995								
	131	•	51		0800		771	351		274		0007	428	1111		952								
	137	7	085		T0883		671	351		275		2001	555			926								
			51		0900		660	351		275		0006	522	1183		925								
			51		1000		599	351		276		0005		1244		917								
			51	D	1100		5 <b>5</b> 0	350	9	277		0005	364	1301	14	914								
	137	7	0B 5		1134		536	350		277					_	914								
			- 7		1 2 2 2	0	C 1 2	350	N Q	277	14	0005	074	1353	1 1 4	915								
	• • • •		51		1200		513							-										
	137	_	51 085	D	1300 1388	0	488 475	350 350	8	277	77	0004		1402	2 14	922								

REFERENC	F	-1				7	10.00	SDEN	6.4	ATION	TIANE	1			DRIGIN	ATOR"	ς	Τ.		MAX,	T	SAZ 1	A V E		W.F.	CLO	ID.			
THY ID	SHIP		JDE	LON	GITUDE	DRIFT	SQL	ARE	517	IGMT	1	Y	EAR	CRUISI	-	STATIO		- 0	TO	DEPTH	01		ATION	2	WEA-	COE				NODC
DDE NO			1/10		1/1	0 N	10"	1.	MO	DAY	HR, 1/1	10		NO.		NUMBE		80	MOTTO	S'MPL"	DIR	НG	T PER	SEA	CODE	TYPE	1 MA		N	UMBER
3113	11 55	3502	. N	041	803 W	1	113	58	08	21	132	119	968	E 15	01	7		43	389	15	35	1	4		X 1	8	3			0017
								WA	TER	T	WIND	-	BARO		AIR TE	MP. °C	VIS		ND.	5 0 6	CIAL	7								
								COLOR	TRAN		- 1	€ED DR	METE		DRY	WE1	cor	nd 1	OBS. EPTHS		ATION S	s								
								CODE	+	_	_	RCE		_		-	-	+				-								
			,							15	50	16	234	2	54	20;		-4	14			Т,		_	.,					,
	MESSEI	NGA CAST	CA		DEPTH	lm I	1	*c		s ·/.	5	igm a	-т [	SPECIFI	C VOLL	IME	₹ A D	й.	sour		Og ml		PO 4 - P		9-JATC	NO2-		NO3-N	51 04-51	рн
	HR 1		TY	PE										ANUN	A A L T - A		x 10 <sup>3</sup>		VELD	CITY		1,	- 01/l	וע	g - o1/I	υg - αl	/	ug - et/l	yg - a1/l	Ĺ
				Ì									İ												ĺ					1
				TD '	000			450		34		453		003	418	6	0000	)	153	51		,								
	1	32	ОВ		000			450		340		453							153											
				TO	001			357		33		480			163		0033		153											
	_			TD	002			262		33		507		002	910	3 (	0063	3	153											
	1	32	ОВ		002			213		323		520		000					152											
				TD TD	003			151 <b>95</b> 5		33		2538 2592			616		00 <b>9</b> 1 0 <b>13</b> 8	_	152 152											
	1	32	0B		005			947		338		594		002	112	4	0136	7	152											
	1	32		TD	007			821		35		627		001	785	3	0187	7	151											
	1	32	08		007			817		350		628		001	.05	,	010		151											
	•	-		TD	010			739		36		648		001	595	2	0229	9	151											
	1	32	OB		010		_	736		358		649			_				151											
				TD	012			704		33		654		001	543	2	0268	3	151											
			S	TD	015		1	678	36	31		659		001	506	6	0307	7	151	69										
	1	32	08	S	015	2	1	676	36	309	2	659	7						151	69										
				TO	020		_	647		27		663		001	481	9	0381	1	151											
	1	32	OB		1020			642		258		663							151											
				TD	025			597		18		2668			451		0455		151											
		2.2		TD	030			543		09		673		001	413	8	0526	•	151											
	1	32	08		030			537		081		2674		001	220	2	^		151											
	1	32	0B	TD	040 T040			422 415		88 869		684 684		001	338	۷ '	0664	•	151 151											
	1	J Z		S TD	050		_	326		, 00 y 575		694		001	263	9	0794		151											
			_	TD	060			191		559		708			141		0914		150											
	1	32	08		T061			174		,,,, ,574		710		501	1-1	_	I.	•	150											
	•	J.		To	070			968		33		728		000	948	4	1019	9	150											
			_	TD	080			788		515		743			803		1106		149											
	1	32	ОВ		081			770		138		74							149											
			5	TO	090		0	679	35	13		75		000	667	0	1180	0	149											
			s	TO	100			597		12	2	767	7	000	569	0	1241	1	149	16										
	1	32	OB		T101			587		121	_	769							149											
				TD	110			554		12		773			522		1296		149											
				TD	120			518		10		779		000	499	8	1347	7	149											
	1	32	ОВ		126			495		092		778		^^^		_			149											
				TO	130			485		09		779			473		1396		149	_										
				TD	140			455		06		780			464		1443		149											
	,	22		T D	150			429		02		779		000	468	7	1489	7	149											
	1	32	OB	3	T152	0	U	422	5.	012		779	7						149	36										

						,																									
REFERENCE	SHIP		.			E.F.	M A R SQU	SDEN	ST	ATION 1	TIME				ORIGIN	ATDR'S			EPTH	MAX, DEPTH			VE		WEA-	Clou			,	ODC	
CODE NO.	CODE	LATITU	1/10	LON	1/10	DIBFT	10*	1.	MO	[GMT]		YEA	A, R	CPUISI		STATIOI NUMBE			10 M	DF S'MPL"S	1		A TION		CODE	COD				ATION	
<b>—</b>	++		_	•		+-				1		1		<del></del>	+						_	+	1	SEA	-		-				-
31131	1 55	3503	N	04	800 W		113		0.8	22		119	68	E15			T	42	206	15	21	2	4		X 1	3 4			(	0018	
								WA		+	WIND		BARC	· —		MP. C	VIS.		NO.		CIAL										
								COLOR	TRA		FOF	r   '	METE Imba		DRY	WET			EPTHS	OBSERV	A TIDNS										
								_	1-	21	51	-	176	. 2	74	23	7 6	1	4	-		1									
		Τ-					1		+		31			, [	-	J		٦,	-			1		1			_				-
	MESSENGA	CAST NO.	CAF		DEPTH	lm 1	T	10		5 -4.	\$1	GMA-	-T	SPECIFI	C VOLU	IME I	₹ A D	4.	200		D <sub>2</sub> ml/		PD4-P		OTAL-P	NO <sub>2</sub> -1		0 <sub>3</sub> =N	5104-51	pН	
	HR 1/10	1		,			<del> </del>										x 10 <sup>3</sup>		VELO	CIII		,	9 - 01/	'	19 = at/1	μg = <del>α1</del> /	νg	- 01/1	μg - et/l		
																															Ì
				TD	0000			385		531		470		003	254	5 (	0000		153	36											
	130	)	083		000			385		5311		470							153												
				10	001			316		533		491			051		032		153												
				T D	002			234		634		516		002	824	1 (	0061		153												
	130	)	083		002		_	189		6342		529							152												
				TD	003			123		534		547			532		088		152												
				TD	005		_	916	-	634		602		002	014	5 (	133		152												
	130	,	OB:		005			916		6339		602		001					152												
	100			TD	007			790		634		634		001	717	6 (	180	,	151												
	130	,	OB:		007			790		6342		634		001					151												
	130		OB:	TD	010			713		631		651		001	569	2 (	221		151												
	130	,		a TD	012			713 690		5311 531		651 656		001	525	7 (	260		151 151												
	130	`	0B:		014			668		5294		660		001	525	, ,	7200	,	151												
	150	,		J TD	015			667		629		660		001	496	2 (	297	,	151												
				T D	020			619		522		666			455		371		151												
	130	)	OB:	_	020			619		6220		666			7,7,7	•	, , , ,		151												
	•			TD	025		_	576		612		668		001	448	6 (	)444		151												
			-	TD	030		_	525	_	603	_	673			418		0515		151												
	130	)	08	s	030	0	1	525																							
			\$	TD	040	0	1	402	3	586	2	687		001	310	5 (	0652	2	151	19											
	130	)	OB:	S	T040	0	1	402	3	5861	2	687							151	19											
			S	Τo	050			316	_	575		696			243		780		151												
				Tρ	060			190	_	560		709		001	132	0 (	898	3	150												
	130	)	OB:		1060			183		5587		710							150												
			-	TD	070			977		534		728			956		1003		150												
				TD	080			805		517		742		000	815	1	1091	l	149												
	130	)	0В:		081			785		5153		744				_			149												
				TD	090			692		514		756			679		1166		149												
				TD	100			607		512		766		000	584	1	1229	,	149												
	130	ر	OB.		102			591	_	5118		768		001		-	1 200		149												
				TD	110			560		511		771			538		1285		149												
	12/	,		ŢD	120			523 495	_	510 5086		775 777		000	506	1	1338	,	149												
	130	,	OB	5 TO	128 130			489		5086 508		777		000	486	0	1387	,	149												
				TD	140			459		506		779			470		1435		149												
			_	TD	150			431		503		780			464		1482		149												
	130	า	0B	_	1154			420		5010		779		000	, +04	,	1 -02	•	149												
	13	5	UB	3	1154	ر	U	720	9	2010		7							147	, , ,											

3113	D. 0001	3501	CARD TYPE  SID OBS SID	NGITUDE - 1/10 801 W E E E E E E E E E E E E E E E E E E	WA COLOR CODE	7RANS. DIR. 28	40 19	SE E 15  BARO- METER (Imba)  163  2	O19 AIR TEMP	WET COI 8UL9 243 5	14	15	25 25 ECIAL VATIONS	PO4-P	1 0000	5 8	ND3-N	N	DO19
3113	MESSENGE TIME OF HR 1/10	CAST	SID OBS SID	DEPTH (m)	113 58 WA COLOR CODE	08 23 1 TER W TRANS DIR. 28 5 °/	40 19	BARO- METER (mbs) (	DPY BULB	WET COI 8UL9 243 5	NO, OBS. DEPTH	Q P Q B S E P	ECIAL VATIONS	2 4	Х6	5 8			
	140	CAST NO.	STD OBS STD	0000	COLOR CODE	7RANS. DIR. 28	SPEED OR FORCE S15	METER (mbs) 6	D#Y BULB 246	WET COI 8UL9 243 5	OBS. DEPTH	QBSEP	2 NOIT AV	PO 100	10141-8	NO2-N	NDN	SI 04-Si	рН
	140	CAST NO.	STD OBS STD	0000	7 °C 2464 2464	28 s */	S15	(mbs) ( 163 2	8018 246	243 5	14	QBSEP	2 NOIT AV	PO 100	total=8	NO2-N	NDN	\$1 O4=\$i	рН
	140	CAST NO.	STD OBS STD	0000	2464 2464	3621	S15	. SPECIFI	IC YOLUMI	₹ ∆ 1		LIND.		PO P	10141-8	NO2-N	NDN	SI O4-Si	рН
	140	CAST NO.	STD OBS STD	0000	2464 2464	3621	SIGMA-	. SPECIFI	IC YOLUMI	₹ ∆ 1		1		PO 1=2	10141-1	NO2-N	NDN	SI O 4-Si	ρН
	140	NO.	STD OBS STD	0000	2464 2464	3621		T SPECIFI ANDA	MALY-X107	DYN.					TOTAL -P	NOn-N		SI O 4 - Si	ρН
	140		OBS STD	0000	2464		<u> </u>	-		x 10	A. VEI	OCITY	02 ml/l	po - 61/		νg - α1/1	μg - αl/l	µg - 01/1	1
		1	OBS STD	0000	2464					X 10				+	+	ļ ·			-
			OBS STD	0000	2464			003	35561	0000	, ,	262		ŀ		1			l
			SID			36205	2438 2438	003	77761	0000		353 353							
	140			0010	2342	3626	2479	003	31746	0034		326							
	140		STD	0020	2228	3630	2514		8367	0064		300							
			OBS	0027	2153	36323	2537					282							
			SID	0030	2119	3632	2547		25340	009	1 15	274							
			STD	0050	1929	3632	2597	002	20581	0136		226							
	140		085	0053	1906	36323	2603		_			220							
			STD	0075	1787	3634	2634	001	7156	0184		189							
	140		OBS	00 <b>79</b> 0100	1772 1735	36337 3635	2638 2648	001	15946	0221		186							
	140		STD	0104	1729	36348	2650	100	7746	0225		178 177							
	140		STD	0125	1701	3632	2654	001	5436	0264		172							
			STD	0150	1672	3629	2659		5075	0302		167							
	140		OBS	0155	1667	36280	2659				_	166							
			STD	0200	1633	3624	2664	001	4722	037		163							
	140		OBS	T0206	1628	36228	2664				15	162							
			STD	0250	1584	3616	2669		4372	0450	15	155							
			SID	0300	1529	3607	2675	001	3979	052		145							
	140		OBS	0304	1524	36061	2675					144							
	140		OBS	10399	1406	35864	2686					120							
			STD	0400 0500	1405	3586	2686		3174	0656		120							
	140		085	10594	1315 1193	3572 35570	2694 2706	001	2635	0789		105 077							
	140		STD	0600	1180	3555	2707	001	1494	0906		073							
			STD	0700	0974	3533	2727		9588	101		014							
	140		085	0796	0810	35192	2743		,,,,,,	101		967							
	•		STD	0800	0804	3519	2744	000	7989	1099		965							
			STO	0900	0669	3515	2760		6382	117		929							
	140		OBS	0994	0575	35116	2770				14	906							
			STD	1000	0573	3511	2769		5440	1230		906							
			STD	1100	0535	3510	2773		5112	1283		908							
			STD	1200	0502	3508	2776	000	4925	1333		911							
	140		OBS	1256	0486	35067	2777	000				913							
			STD	1300	0474	3506	2777		4802	1387		916							
			STD	1400 1500	0450 0431	3504 3502	2779 27 <b>7</b> 9		)4728 )4716	1429		922 931							
	140		OBS	T1518	0431	35013	2779	000	, → 1 I D	141		932							

REFERENCE	SHIP	LATITU	0E 1/10	LONGITUDE	SOUARE 10' 1'	STATION IGM	TI Y	EAR		TATION LUMBER	DEPTH OT OT MCCTTOB	DEPTH OF S'MPL'S		AAVE EPVATIONS HGT PEFT SI	0.00	CODES		5	NODC NOITATE MUNEER
31131	1 55	3501	N	04803 W	113 58		-	968	E15 020		3658	16	24	1	×1	6 5			0020
					-	OR TRANS DI	WIND	BARO-		WET CO	NO. 085.	SPEC OBSERVA							
					COD	iE imi	FOICE	(mbs1	BJLB	BULB	DEFINS								
		_				23	508	146	264	235 6	14								
	MESSENG TIME HR 1/10		TYPE		7 %	5 *1.	51G A+ 4	-T	SPECIFIC VOLL	DYN X			0; n .	PO4=P	101A	NO3-N µg - 01/	NO 2 - M	\$104~5 #\$ ~ 0°	24
			ST	0000	2394	3610	245		00 34 34 8	. 0000	153	2.5							
	13	3	OBS	0000	2394				00 34 34 6	5 0000	153								
		-	ST		2242		250		0029429	9 0032									
			ST		2116		254		0025534										
	13	3	085		2042						152								
			ST		2020		257		0022830	0084									
			ST	0050	1894	3632	260	5	001977	2 0126	152	16							
	13	3	085	0054	1872	36316	261	2			152	10							
			ST	0 0075	1779	3632	263	5	001708	3 0172	151	87							
	13	3	OBS	0081	1759	36320	264	)			151	82							
			ST	0100	1722	3632	264	9	0015834	4 0213	151	74							
	13	3	085	0108	1708			_			151								
			S T		1690		265		0015329										
			ST		1662		265		0015066	5 0290	-								
	13	3	OBS		1648						151								
			ST		1597		266		001450	0364									
	13	3	OBS		1577						151								
			ST		1568		267		001431										
		_	ST		1539		267		001412	3 0507									
	13	3	OBS	0329	1515				001227	0	151								
	1.2	,	STI OBS		1425		268		001337	2 0645	151 151								
	13	3	5 T		1371 1284		268° 269°		001230	9 0773									
			5 T		1134		271		001230										
	13	2	0B 5		1041				001113	. 0070	150								
	1 3	,	ST		0958		272		000945	8 0993									
			ST		0784		274		000767										
	13	2	OBS	_	0682		_		000,0,	101.	149	-							
	13	2	ST		0663		275		000651	4 1150									
			ST		0592		276		000570										
	13	3	085		0542						149	-							
	• -	-	ST		0540		277		000521	1 1266									
			ST	-	0518		277		000507										
			ST		0494		277		000490										
	13	3	OBS		0476	35078	277	9			149	29							
			ST		0469	3507	277	9	000476	7 1415	149	30							
			ST	D 1500	0442	3505	278	0	000464	7 1463	149	36							

						,										MAX.	1			_		-		
E .	SHIP	LATITU	n.	LDN	GITUDE 12		SDEN	STATIO	N TIM MT)		YEAR		DRIGINAT		DEFTH	DEPTH		SEPVAT	E EDNS	WEA	CLOUD		1 .	NODC
. c	DDE		1/10	LUN	GITUDE NO	10*			Y HR.			CRUISE NO.		MBER	BOTTON	S'MPL			ER SE	CDD	TYPL AN			UMBER
11	55	3502		048	800 W	113	1	08 2	_		968	E15	021		4160	15	24	3 4		×1	8 2		(	0021
							WAT		wir	ID.	BARG		AIR TEMP	. "C	NO.			)	•				,	,
							COLDR	TRANS.	DIR.	SPEED OR FORCE	METE	R (	DRY ULB	WEI COD	0.05		CIAL /ATIONS							
								- [:	25 5	15	186	5 2	41	187 7	14			l						
1	ESSENGR TIME C R 1/10	OF NO.	CAF		DEPTH (m)	ī	2	۶.	4.	SIGM	A-T	SPECIFIC	VOLUMI	₹ △ D DYN, A x 10 <sup>3</sup>	A. SD	UND OCITY	02 ml/		4-P - 01/I	TOTAL-P		ND3-N ug + at/l	\$1 D4-\$1 pg - at/1	рН
												١				1						1		
				T D	0000		375	362		247		003	2558	0000		333								
	143	3	OB:		0000		375	362		247						333								
				TD	0010		375	362		247			2602	0033		334								
				TD	0020		374	362		247		003	2635	0065		336								
	143	5	083		0023		374	362		247		003	0605	0000		336								
				TD	0030		229	362		251 259			8505	0096		302								
	9/3	,		TD	0050	_	931	363				002	0485	0145		226								
	143	,	083	o To	0050 0075		931 808	363		259 263		001	7616	0192		226 196								
	1/2		08		0076		804	363		263		001	1010	0172		195								
	143	,		TD.	0100		730	363		264		001	5903	0234		177								
	143	2	OB:		0100		730	363		264		001	<b>)</b>	0234		177								
	143	,		TD	0125		705	363		265		001	5455	0273		173								
				TD	0150	_	680	363		265			5155	0312		170								
	143	3	OB:		0150		680	363		265						170								
	•			TD	0200		627	362		266		001	4718	0386		161								
	143	3	OB:		0200		627	362		266						161								
	•			TD	0250		586	361		266		001	4489	0459		156								
	143	3	08		0298	1	541	360	78	267	3				15	149								
			S	Τo	0300	1	539	360	7	267	3	001	4196	0531	15	148								
	143	3	OB:	S	T0393	1	437	359	12	268	3				15	129								
			S	T D	0400	1	429	359	0	268	4	001	3383	0669	15	128								
			S	Tρ	0500	1	306	357		269		001	2528	0799		102								
	143	3	OB:		T0590		176	355		270						070								
				ΤO	0600		156	355		270			1258	0918		064								
			S	τo	0700		969	353		272		000	9501	1021		012								
	143	3	OB:		0792		821	351		274						970								
				TD	0800		809	351		274			8068	1109		967								
				TD	0900		673	351	-	275		000	6661	1183	_	930								
	143	3	08		0993		581	350		276						908								
				T D	1000		578	350		276			5700	1249		908								
				TD	1100		542	350		277			5334	1300		910								
		_		TD	1200		509	350		277		000	5006	1352		913								
	143	3	08		1251		494	350		277		000	4760	1100		916								
				1D	1300		481	350		277			4750	1400		919								
				10	1400		456	350	-	277			4663	1447		925								
			S	ŤΒ	1500	U	436	350	,	277	7	000	4711	1494	14	933								
	143	_	OB		T1512	_	434	350		277				_		934								

THY ID.	SHIP	LATITU	DE 1/10	LONGITUDE 11. 10	sau			TION TO GATE		YE	AP	CRUISE NO		ATOR'S TATIO TUMBE	N	DEPTH TO BOTTON	DEP	TH F	0858	WAV RVA	TIONS	THE COL	9	LOUD ODES			NODC STATIO NUMBE	IN.
31131	1 55	3502	N	04802 W	113	58	08	26	136	19	68	E15	02	2		4206	14	4 :	34	1 5	,	×1	1 8	5			002	2
						W.A.	TER		WIND		BARD		IR TE	vP ℃	V15	NO.	5	PECIAL										
						CODE	TRAN Im I	S. DIR.	SPEE CR	1	(mbs)		ULB ULB	BULI	CODI	OBS. DEPTHS		PVATIO										
								05	510	)	217	2	42	190	7	14												
	MESSENG TIME HR 1/11	CAST OF NO.	C ARE		1	τς		•	SIC	G 44 A =	-Т	SPECIFIC		M.E.	₹ 1 D DYN: M x 10 <sup>3</sup>	. VEL	OCITY	02	m1/1		4=P - 01/I	fOTAL-		02~N - at/1	NO3-N µg - a1/1	\$1 O4\$ yg - al/		н
			ST	D 0000	2	366	36	27	24	472		003	230	 6 (	0000	15	330			1								
	13	6	OBS	0000	2	366		270		472						15	330											
			ST	D 0010	2	363	36	27	24	473		003	227	0 (	0032	15	331											
			ST	D 0020	2	360	36	27	24	474		003	223	5 (	0065	15	332											
	13	6	OBS	0022	2	359	36	266	24	474						15	332											
			51	D 0030	2	207	36	30	25	520		002	784	) (	0095	15	296											
	13	6	OBS	0045	1	987	36	333	25	583						15	241											
			s T	D 0050	1	939	36	33	25	596		002	075	6 (	0143	15	228											
	13	6	OBS	0067	1	818	36	335	26	627						15	197											
			ST	0 0075	1	793	36	36	2.6	635		001	711	6	0191	15	191											
	13	6	OBS	0090	1	755	36	392	26	647						15	183											
			ST	D 0100	1	746	36	38	26	648		001	595	5	0232	15	182											
			ST	D 0125	1	717	36	35	26	653		001	558	6	0271	15	177											
	13	6	OBS	0135	1	702	36	340	26	655						15	174											
			S T	D 0150	1	668	36	32	2 (	662		00 l	476	7	0309	15	166											
	13	6	085	0181	1	612	36	270	20	671							154											
			s T	D 0200	1	607	36	24	20	670		001	414	1 .	0381		155											
			S T	D 0250	1	582	36	17	20	671		00:	425	6	0452	15	155											
	13	6	085	0274	1	564	36	128	26	671						15	153											
			ST	D 0300	1	536	36	08	26	674		001	405	8	0523		148											
	13	6	OBS	T0367	1	458		948	20	68I							132											
			ST	D 0400	1	410	35	88	2	686		001	313		0659		121											
			ST	D 0500		265	35	69	2	702		001	186	1	0784	15	088											
	13	6	085	T0553	1	187																						
			ST	D 0600		120		51		715		001		-	0897	-	052											
			ST			972		36		730		000	933	4	0997		013											
	13	6	OBS			906		295		736							995											
			ST	D 0800	0	794		21		747		000			1082		961											
			ST			641		09		759		000	641	4	1152		917											
	13	6	OBS	T0926		610	_	075		762							909											
			\$T			577		80		766		000			1213		908											
			51			536		808		772		000	528	0	1268	-	908											
	13	6	085			507		081		775				_		-	909											
			ST			500		08		776		000			1319		910											
			ST			467		505		777		000			1367		913											
			SI	D 1400	0	438	3 5	501	2	777	,	000	478	6	1415	14	917											
	13		085	_		431		000		777				-			918											

REFERENCE	SHIP	LATITU	DE LOI	NOITUDE TOO	MARSOEN SOUARE	STATION THE	ME YEAR	ORIGINATO	ItON	TO	MAX. DEPTH OF	085	WAVE ERVATIONS		CLOUD		5'	100C
DE NO.	CODE		1/10	1/10	10" 1"	MO DAY HE	t.1/10		MBER	BOTTOM	S, W L . 2	DIP.	HGT PEP S	EA COOF	TYPE AM	Ť	N	UMBER
311311	55	3502		802 W	113 58	08 27 1	90 1968	E15 023		3931	13	04	1 3	× 1	8 3			0023
					WA	TER W	INO BAR	O- AIR TEMP.	°C vis.	NO.	SPEC	LAI						
					COLOR	TRANS. DIR.	SPEED MET	ER ORY V	VET CODE	DEPTHS C	BSERVA							
						+	FORCE (mb											
						0.3	512 19	3 257 1	01 7	14						1		
ĺ		및 NO.	CARD	OEPTH (m)	т *С	5 *4.	SIGMA-T	SPECIFIC VOLUME	₹ △ 0 0YN, M x 10 <sup>3</sup>	SOUN		O 2 mt/l	PO 4=P ug + at/1	101AL-P		NO3-N µg + 01/1	\$1 O4-\$1 Vg - 01/1	рН
	HR 1/10	-		1	-	+	-		-	-		-	+		-	-	1	
		,	STD	0000	2349	3627	2477	0031815	0000	1532	26		1	1	1	i .	l	•
	190	)	OBS	0000	2349	36272	2477	0031013	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1537								
	1 70	,	STD	0010	2346	3629	2480	0031640	0032		-							
			STD	0020	2342	3631	2482	0031470	0063									
	190	)	OBS	0021	2342	36307	2482			153	28							
			STD	0030	2180	3632	2530	0026973	0093	152	89							
	190	)	OBS	0043	2005	36333	2578			152	45							
			STD	0050	1959	3634	2591	0021202	0141									
	190	)	OBS	0064	1873	36344	2613			152								
			STD	0075	1806	3634	2630	0017540	0189									
	190	0	OBS	0085	1760	36344	2642			151								
			STD	0100	1747	3636	2646	0016152	0231									
			STO	0125	1726	3638	2653	0015597	0271									
	190	)	OBS	0127	1724	36379	2653	0015440	0210	151								
		_	STD	0150	1704	3634	2655	0015443	0310									
	190	0	OBS	T0171	1684	36311	2658	0014959	0386	151 151								
			STD	0200	1650 1592	3626 3616	2662 2668	0014999	0459									
	10/	^	STD OBS	0250 0254	1587	36155	2668	0014549	0479	151								
	190	U	STD	0300	1533	3606	2673	0014138	0531									
	190	n	OBS	T0336	1491	35993	2677	0014190	0,7,7	151								
	190		SID	0400	1418	3589	2685	0013226	0668									
			STD	0500	1294	3571	2697	0012289	0796									
	19	n	OBS	T0502	1291	35705	2697			150								
	19.	-	SID	0600	1157	3551	2709	0011350	0914									
	19	0	OBS	0665	1058	35397	2718			150	39							
	- /		STO	0700	0987	3535	2727	0009667	1019	150	19							
			STD	0800	0812	3522	2745	0007896	1107	149	68							
	19	0	OBS	T0827	0772	35197	2749			149								
			STD	0900	0690	3515	2757	0006694	1180	149	37							
			STD	1000	0597	3510	2766	0005851	1242									
	19	0	OBS	1054	0557	35082	2769			149								
			STD	1100	0528	3507	2772	0005236	1298									
			STD	1200	0483	3505	2776	0004887	1348									
			STD	1300	0461	3504	2777	0004773	1397	_								
	19	0	OBS	T1302	0461	35038	2 <b>7</b> 77			149	10							

Table X.—Observed and interpolated oceanographic data for stations taken by USCGC CHASE at Ocean Station ECHO, 1-22 September 1968, prepared from NODC listing No. 31-8502

FERENCE IV ID. NO.	CODE	LATITU	DE LO	NGITUDE 1/10	MARS SQU	ARE	STAT	ION T		YEAR	CRUISE NO.		TOR'S ATION JMBER		08PTH 10 80TTOM	MAR, DEPTH OF S'MPL"S		WAVE SERVATIO		WEA- THER CODE	CODE	5		NOOC STATION NUMBER
18502	E 1	3500	N 04	800 W	113	58	09 (	01	060	968	F16	001		- 1	4390	03	00	0 0		×1	0 3			0001
1,5000	.,			,	, [	W.A.			VIND	BARG	1	AIR TEM	P °C	1	NO.			0 0	1	/ 1	1013	1	1	0001
						COLOR	TRANS.	DIR	SPEED	METE	R I	YSC	WET	CODE	200	SPEC ORSERV								
					-	COOF		-	FORCE	+	_	ULB	BULS	-										
	_				,	DT	SU	18	502	196	5 2	33	228	7	14			L	-			,	-	_
	MESSENC TIME HR 1/1	CAST	CARD TYPE	DEPTH (m)	T	°C	s	٠/	SIGA	^A-T		VOLUA ALT-ETO	, D	Δ D rn, M. x 10 <sup>3</sup>		DCITY	O2 ml/l	PO4-		101AL-P ug = 01/1	NO2-N ug - 01/1			
	'		STD	0000	2:	353	36	26	24	76	003	1999	00	000	153	327		'			'	,	•	
	06	0	OBS	0000	23	353		262	24	76					153	327								
			OBS	0008				260																
	00		STD	0010			36																	
	00	4	OBS STD	0010 0020			36	220																
			085	0020				262 262																
			STD	0020			36																	
			085	0030				312																
			STD	0050			36																	
			085	0050				321																
			085	0061				281																
			STD	0075			36	35																
			085	0075			36	352																
			STD	0100			36:	39																
			085	0100			36:	387																
			STD	0125			36																	
			OBS	0125				335																
			STD	0150			36																	
			OBS	0150				293																
			STD	0200			36																	
			OBS	0200				222																
			STD OBS	0250 0250			36	14 142																

																					_							
REFEREN		SHIP	LATITU		1000	TUDE E		SDEN	STATION 1		YEAR	_	ORIGI	_		╝.	OEPTH TO	DEPT	.5.1		VAVE RVATIO		WE		CLOUE			NODC
	0. 10.	CODE	-	1/10	LONG		10*	!	MO DAY		16.04	CRU		STATI NUM		81	ottom	OF S'MPI			GT PER		1 50	3 E L	TPE A			NUMBER
31BS	0.2	E1	3500		0481	00 W	113	1			1968	E 1	6 00	2		4	352	03		$\overline{}$		2		$\neg$	0 3	1		0002
2103	102	L I	3,000	, K	040		1113	WAI		WINO		т-т	AIR TE			Ť	NO.	,		<b>7</b>	- 1	2	. ^.	L [	0 13	'		0002
								COLOR		SPEED	BAR		DRY	w	ET C		OBS.		ECIAL VATIO	NS								
								CODE	(m)	FOIC	t (mb:	$\rightarrow$	BULB	81/	LB	1	PERINS			_								
								DT	5D 21	502	21	0	283	24	4 7		13			$\perp$								
		MESSENGI	CAST NO.	CA		DEPTH (m)	,	*c	s ·/	SIG	MA-I		IFIC YOU		₹ ∆ DYN.	Μ.		JND	02	mt/1	PO4-		TOTAL		102-N			
		HR 1/10	A 14.0.	TY	PE								J. M. A. C. 1 – X		х 1	0,3	VELC	CILT	L		₽9 - C	**/	01 - وبر	" "	g + n1/	μg - αl/	μg = 01/	1
																	i									1		
				5	TD	0000	2	358	3626	24	74	00	3213	9	000	0	153											
		12	l	ОВ		0000	2	358	36262	24	74						153	328										
				-	T D	0010			3626																			
				ОВ		0010			36262																			
		00		_	TD	0020			3626																			
		00	L	ОВ		0020			36262																			
				OB	TD	0030			3628 36278																			
					TD.	0050			3632																			
				0B		0050			36318																			
					TD .	0075			3640																			
				ОВ	-	0075			36398																			
					TD	0100			3641																			
				OB		0100			36406																			
					TD	0125			3635																			
				08		0125			36349																			
				s	TD	0150			3633																			
				ов	5	0150			36326																			
				S	TD	0200			3626																			
				ОВ	S	0200			36261																			
				S	TD	0250			3614																			
				ОВ	5	0250			36137																			
				S	TD	0300			3607																			
				ОВ	5	0300			36068																			
				ОВ	S	0308	1	522	36068	26	76						151	44										

CIRY	RENCE ID.	SHIP	LATITU	JDE	LON	GITUDE	DELFT	MARS	OEN ARE	ATZ	TION T		YE.A.R			TATIO	N		DEPTH TO	DEP	TH		WAV			WEA-	CLO			51	NOOC ATION UMBER	
ODE	NO.	CODE	•	1/10		1/10	٥ž	10°	1.	МО	DAY	IR,1/10		1	10. N	1 U W B E	8	1	MOTTO	S'FAI	PL*S	DIR	HGT P	E# SE	Α '	CODE	TYPE	T AA A			UMOER	
31	8502	E1	3500	N	048	800 W		113	58	09	01	177	1968	E	16 00:			4	352	0	3	19		2	2	X1	0	3		(	0003	
									WA	ER	1	WIND	BAR		AIR TEA	U.P. °C	VI	,	NO.	S	PECIA	.										
									COLOR	TRAN	OIR.	SPEED	- Milli		BULB	BUL		DE	OBS. DEPTHS	0858	RVATI	ONS										
								-	DT	SD	22	SO5		_	278	239		+	13			-										
				,-			_		וע	30	22	303	14	9	210	23	4 /		10		-		1		-			_	1			_
		MESSENGE TIME HR 1/10	약 NO.		PE PE	OEPTH	(m)	ī	*c		·4.	SIG	M A - T		CIFIC VOLU NOMALY—XI		₹ Δ t DYN, 1 * 10	Μ.		OCITY	0,2	ml/l		4-P 01/I		A L - P	NO2-		NO3-N µg - al/l	51:04+\$1 99 - at/1	рН	S C C
			1															_														$\Box$
			1	's	Tp '	0000	0	24	432	36	26	24	52	0	03421	θ (	0000	0	153	346	1		1			,		,				' '
		17	7	ОВ	5	0000	0	24	432	36	264	24	52						153	346												
				S	T D	0010	0			36	25																					
				08	5	001				36	253																					
				S	TD	002	0			36	24																					
		00	3	OB		002					242																					
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				08		012					372																					
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				ОВ	ID.	015					343																					
				08		020					25 251																					
					TD	025					18																					
				08	_	025					182																					
					TD	030					11																					
				08		030					111																					
				08		031		1	543		111	26	75						15	152												
				00		031	7	1	773	50	111	20	,,,							. ) [												

	SHIP	LATITU	DE 1/10	LONGITUDE 1/10		SDEN JARE	STATION IGMI	)	YEAR	CRUIŜE NO.		TOR'S ATION IMBER	T	TO	MAX, DEPTH OF S'MPL'S		WAV SERVA	TIONS	TH	01	CLOUO CODES			NODC STATION NUMBER	
318502	E1	3501	N	04803 W	113	58	09 02	058	1968	E16	004		438	89	03	29		1 2	2 X	1	0 3			0004	
						WA	TER	WIND	BAR	o^	IR TEM	P. °C	, NO		SPEC	TAL									
						COLDR	TRANS. OIR		7		ULB	WEI CO			DBSERV										
						DT	SD 29	S13	19		-	228 7	19	_											
						U	30 27	313	17	2 4	,,			2						-				-	_
1	TIME a	CAST NO.	CARD		) 1	*c	s *4.	SIG	MA-T		VOLUM ALY-X10?		M	VELOC		O 2 ml/l		14=P - 01/I	101A1 0 - gu		NO2-N µg - at/l	NO3-N yg + ai/l	21 O4=		S C C
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		'	ST	D 0000	2	390	3625	24	64	003	3125	000	ו כ	1533	36 ່		,								, ,
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			085				36249																		
			085				36242																		
			OBS				36193																		
			ST				3623																		
			085	0050			36226																		
			ST	D 0075			3634																		
			0B S				36342																		
			ST				3639																		
			OBS				36388																		
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			ST				3617																		
			085				36174																		
			085	0297			36094																		
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			08.5	0300	1	543	36094	26	74				1	1519	50										

ID.	CODE	LATITU	1/10 LO	NGITUOE TO NGITUOE	MARSDEN SOUARE	WO.	ATION IGM		YEAR	CRUISI NO.		TATION TUMBER		DEFTH TO IOTIOM	MAX. DEPTH OF S'MPL*	OBS	WAVE ERVATIO	_	WEA- THER CODE	CODE	5		NODC STATION NUMBER
850	2 E1	3500	N 04	800 W	113 58	09	02	118 1	968	F 16	009	5	3	840	03	33		2	×1	0 3			0005
						ATER	1	WIND	BARC	_	AIR TEA			NO.	1		1 1	-	1 / 1	10.5	'		0000
					COLO			SPEED	METE	R	DRY	WET	CODE	OBS. DEPTHS	OBSERV	CIAL							
					COD	-	``	FORCE	(mbs	_	BULB	DULD	$\leftarrow$										
					DT	5	D 3:	506	20	7 3	17	239	7	15									
	MESSENGI	CAST	CARD	DEFTH (m)	1 10		s ·/	SIGM	Ì		IC VOLU	ME \$	A D		UNO	0 2 ml/1	PO4-	P .	OTAL-P	NO2-N	NO3-N	SI O4-S	,,
	HR 1/10		TYPE	02	' "		,	3107	,,_,	ANOA	MALT-11	97	103	VELO	DCITY	O2 mos	μg - 01	71	µg = 01/1	μg = at/(	µg = 01/1	μg = αt/	PH
																	1	$\top$					
	1	1	STD	0000	2374	່ 3	624	246	8 '	003	32732	2 ່ວເ	000	15:	332		1	- 1		l	1	1	1
	110	9	OBS	0000	2374		6242					_			332								
			STD	0010		3	624																
			085	0010		3	6242																
			STD	0020		3	618																
	006	5	085	0020		3	6176	,															
			STD	0030		3	628																
			08.5	0030			628 6282	•															
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			08 S 08 S	0030 0036		3 3	6282 6312																
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			OBS OBS OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0030 0036 0042 0050 0050 0075 0075 0100 0100 0125 0125		3 3 3 3 3 3 3 3 3 3 3 3	6282 6312 6169 6331 636 6358 6376 6376 6356																
			OBS OBS OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0030 0036 0042 0050 0075 0075 0100 0100 0125 0125 0150		3 3 3 3 3 3 3 3 3 3 3 3 3 3	6282 6312 6169 633 633 636 635 637 635 637 630 630	: : : : :															
			OBS OBS OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0030 0036 0042 0050 0075 0075 0100 0125 0125 0150 0200		3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	6282 6312 6316 633 633 636 635 637 637 637 630 630 630	: : : : :															
			OBS OBS OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0030 0036 0042 0050 0050 0075 0100 0100 0125 0125 0150 0150 0200		3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	6282 6312 6316 633 633 636 637 637 637 637 637 637 63	2															
			OBS OBS OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0030 0036 0042 0050 0050 0075 0100 0100 0125 0150 0150 0200 0200 0250		3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	6282 6313 6316 633 636 635 637 637 637 637 637 637 637 637 637 637	2															
			OBS OBS OBS OBS SID OBS SID OBS SID OBS SID OBS SID OBS SID OBS	0030 0036 0042 0050 0050 0075 0100 0100 0125 0125 0150 0200 0200 0250		3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	6282 6313 6331 6336 6336 6336 6337 6337 6339 6339 6349 6349 6349 6349 6349 6349	2															

ENCE IO.	SHIP	LATIT	UOE	LO	NGITUOE	DRIFT	MARS		STA	TION TI	ME	YEA	R CR	UISE		TATION		DEFTH TO	000	H OR	WAV SERVA		ıs	WEA	C	ODES			NODC
NO.	COOL		1/10		1/10	" Z	10"	1.	MO	DAY H	2,1/10			NO.		UMBER		\$0110¢	A S'MPL		MGT	PER	SEA	COD	179	1 44	1		4UMBEP
BS02	El	350	1 N	04	803 W		113	58		02 1	78	196	58 E	16	006			4407	03	18			4	×1	0	3			0006
								WA	<del>,</del> -	+	SPEE		ARO-		IR TEA	_	VIS.	NO.		ECIAL									
								COLOR		S. OIR.	PORC	- 1 "	A ETER (mbs)		JLB	WET BULB	COD	DEPTH	OBSER	2 MOIT AV									
							i	DT	SD	31	504	_	193	20	51	211	7	14			1								
	TIME		CA		DEPTH	(m)	1	τ		-4.	SIC	MA-			VOLU:	7' C	∆ 0 YN. # x 10 <sup>3</sup>	30	UND OCITY	0 2 ml/		04 <del>-</del> P		DTAL-1		2-N - 01/l	NO3-N	\$1 D4~5	
	HR 1/1	0	-				┼─		+		+		+			-	* 10	+-			-		+						
	1	I	١ ,	TD	000	n	2	475	36	30	24	42	١	039	5201	١,	000	15	357	ļ	ı		1		ì		l	1	)
	17	8	ОВ		000			475		299	_	42		•					357										
			S	TD	001					30																			
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	00	,	S OB	ŢD	002					31 307																			
	00	1		TD.	002					31																			
			ов		003					305																			
			OB	S	003	5			36	383																			
				ΤD	005					29																			
			OB		005					293																			
				TO	007					38																			
			ОВ	S TD	007 010					380																			
			0B		010					432																			
				TD	012					39																			
			08		012					386																			
				TD	015					37																			
			OB	S	015					373																			
				TD	020					30																			
			OB		020					302																			
			_	TD	025					21																			
			08		025					205																			
			08		029			E 17		161	2.4	580		Λ1:	349	2 0	730	16	149										
			5 08	TD	030 030		_	537 537		16 161	_	580	U	01	3 <b>47</b> .	2 0	130		149										
			UB		030	-	1	131	) (	101	٤,	.00						• -	/										

ID. 10.	SHIP CODE	LATITU	JDE 1/10	LON	GITUOE '1/10	DAUFT		SOEN JARE		ON T		YEAR	CRUIS		ATOR'S STATION NUMBER		OEPTH TO BOTTON	MAX. OEPTH OF S'MPL'	1 0	WAVE SERVATI	ONS	JĮ	HER ODE	CLC	DES		5	NOOC TATION UMBER
502	El	3500	) N	041	800 W		113	58	09	2 2	38 1	968	E16	00	7		4297	03	33		3	,	$\overline{\mathbf{a}}$	0	3			0007
								WA		-	/INO	BAR	1	AIR TE		T	NO	T -		ι' '	1	, ,		•	-		,	
								COLOR	TRANS.	OIR,	SPEED	MET (mb	R	ORY BULB	WET	COD	0.05	CREERS	CIAL ATIONS									
								DT	SD	29	502	20		233	206	7	13	-										
	MESSENGR TIME HR 1/10	CAST NO.	CA		OEPTH	lm I	1	°C	5	٠4.	SIGA	1-A		IC VOLU	n2 C	∆ 0 YN. W X 10 <sup>3</sup>	, , , ,	UNO	O 2 m1/	PO4		TOTA		NO2-		NO3-N yg - a1/I	\$1 O4=\$1 yg - 04/8	ρН
ĺ																												
				TD	0000			426	363	31	245	7	003	375	1 0	000	15	345										
	238		ов		0000		2	426	363		245	7					15	345										
				TD	0010				362																			
			ОВ		0010				362																			
				TD	0020				363																			
	001		ОВ		0020				363																			
				TD	0030				362																			
			ОВ	-	0030				362																			
			OB		0044				363																			
				TD	0050				363																			
			ОВ		0050				362																			
				TD	0079				363																			
			0В		007				363																			
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			ОВ		0150				363																			
				TD	0200				362																			
			OB.		0200				362																			
				TD	0250				361																			
			OB.	_	0250				361																			
			08	TD	0300			518 518	360 360	-	267 267		001	3901		715		142 142										

	HIP	LATITU	DE 1/10	LONGITUDE 1/1/10	MAR SQU	ARE	STATION IGN	TIME	YE A	R	CRUISE NO.		OR'S TION MBER		DEPT TO BOTTO		MAX. IEPTH OF MPL'S	OBSI	WAVE ERVAT	ONS	WEA THER COD	CODES			NOOC STATION NUMBER	
318502 E	1 :	3501	N	04803 W	113	58	09   03	059	196	8	E16	800		- 1	443	5   1	03	31		2	X1	0 3			0008	
						WAT	ER	WINC		ARO	. Al	R TEMP		VIS.	NO.		SPECI	A1 .								
						COLOR	TRANS. O	IR.   (		METER (mbs)			W E T	CODE	OBS	HS OB	SERVA									
						DT	SD 2	_		200	-	_	206	7	13	$\rightarrow$		-1								
	SSENGR TIME OF	CAST NO.	CAR		т	٣	5 ./.	1	SIG MEA —!	ī	SPECIFIC ANDMA		₹0	∆ 0 rN, M x 10 <sup>3</sup>	s VI	ELOCIT		) 2 m1/l	PO.		101AL-1	NO2-N yg - ol/l	NO3-N yg - at/l	SI O4-		s c c
					1																					
	000		ST			406	3627		461		0033	413	00	000		534(										
	059		085 51		2	406	3627	3 2	461						1 :	5340	0									
			OBS				3625 3624	6																		
			ST				3626	9																		
	001		OBS				3626	2																		
	001		ST				3629	,																		
			OBS				3629	3																		
			5 T				3631																			
			OBS	0050			3631	3																		
			5 T	D 0075			3630																			
			085				3630	3																		
			ST				3632																			
			OBS				3632	1																		
			ST				3631	_																		
			OBS				3631	2																		
			ST				3630	_																		
			08 S				3630 3622	J																		
			OBS				_	,																		
			ST				3622 3614	,																		
			085				3613	5																		
			OBS				3607																			
			ST		11	525	3607		676		0013	870	0.7	709	1 4	5144	4									
			овѕ			525	3607		676							5144										

FERENC	E	SHIP				E 8	MARS		STAT	ION T	IME		OF	IGINATO	R'S	DEP		MAX			WAVE		T WEA-			T	N/_	
NO NO	. I.	CODE	LATITU	DE 1/10	LONGITUDE	NOON _	10*			GMT	IR.1 10	YEAR	CRUISE ND.	STA	HON	BOIT	2	O.F			RVATIO		THER				STAT D NUMB	N
1850	12	F1	3500		04800 W	+-+					-	1048	E16			4.30		S'MPL			HGT PER	-	-	TYPE A V	1			
103	14		3300	14	0-000 #	1 11	٦	WAT	_		WIND		1 41	TEMP.	90	429		03	-	8 9		2	X 1	0 3			000	9
								COLOR	TRANS	DIR.	SPEED OR FORCE	10.00	R DR	y V		DE DEPT	ś.   "	SPI SBSER	VATIO									
								DT	50	30	508	21:	3 23	3 2	06 7	13												
		MESSENGR TIME HR 1/10	U NO.	CAR TYP		(m)	7	°C	S	٠.,	SIG	M A - T	SPECIFIC -		S A OYN.	M	SDUN		D <sub>2</sub>	m1/1	PO4-		101A L-P	NO <sub>2</sub> -N µg - at/l	NO3-N yg - al/l			н
		120	1	5 T 0 B S				189 189	362		240		0033	133	000		53											
		120	,	51			23	009	362		24	54				1	53:	36										
				085					362																			
				ST					362																			
		002	2	OBS					362																			
				ST	0 003	0			363	1																		
				085	003	0																						
					003	-			363	808																		
				ST					363																			
					D 005	0			_	1																		
				ST	D 005 005	0			363	107																		
				ST 085	D 005 005 D 007	0 0 <b>5</b>			363 363	107																		
				ST 085 ST	D 005 005 D 007 007	0 0 5 5			363 363	1 107 11 112																		
				085 51 085	D 005 005 D 007 007 D 010	0 5 5			363 363 363	107 11 112																		
				ST 085 ST 085	D 005 005 D 007 007 D 010	0 0 5 5 0			363 363 363 363	1 107 11 112 11																		
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				ST OBS ST OBS ST OBS ST OBS ST OBS	D 005 D 007 D 007 D 010 D 012 D 012 D 015 D 020 0 020 0 025	0055500550000000			363 363 363 363 363 363 363 361 361 361	1 107 11 112 113 10 198 182 7 73 31																		
				ST OBS ST	D 005 005 D 007 D 010 D 012 D 012 D 015 D 020 020 0 025 0 030	0 0 5 5 5 0 0 5 5 5 0 0 0 0 0 0 0 0			363 363 363 363 363 362 361 361 361	107 112 113 10 118 113 10 198 188 187 173 133 133																		

REFERENCE CODE N	SHIP		ATITU	OE 1/10	LON	GITUDE	DAIRT	MARS SQU	OEN ARE		ATION IGMT		YEAR	CRUISI NO.	E	ATOR'S STATION NUMBER	i k	DEPTH TO BOTTOA	DEPTE	OBS	WAVE ERVATE	ONS	WEA THER CODE	COOES			NOOC STATION NUMBER
2300	02 51		<b>c</b> ∩ 1		04.6					09			1968	E 1 6	0.1	0		4361	03	31		2		0 3	Ì		0010
31b2	02  E1	3	501	PK.	046	803 W	1 1	113	WA			WINO			AIR TE			NO.	ľ	,			1 ~ 1	1013	,	1	0010
									COLOR	_		SHEED	MET	ER	DRY	WET	COD	085.	OBSERV	CIAL							
									CODE	ler	'	FORC			BULB	EULB		DEPTHS	<u> </u>								
									01	S	27	507	201	0 2	50	211	7	20									
	MESSE TIM HR 1.	NGR C	AST NO.	C.A. TY		DEPTH	[m1	т	°C		s ·4.	SIG	M A =1	SPECIFI	C VOL	IME 107	¥ △ □ YN. ₩ X 103	. SO VEL	UNO OCITY	O2 ml/l	PO 4		707AL-P pg - o1/I		NO3-N ug - 60/1		
			i		_		_			1						,											
		<b>-</b> 0			10	000			26		521	24		003	443	6 0	000		344 344								
	1	78		08	S TD	000		24	+26		5210 527	24	50					15	544								
				08		001					5267																
					TD	002					530																
	0	01		08		002					5299																
				S	Ťο	003	0			3	530																
				08	S	003	0				5299																
				ОВ		004					5310																
				ОВ		004					5248																
				ОВ		004					6298																
				0B	TO	005 005					522 5220																
				08		005					6267																
				OB		005					6180																
				OB		005					6230																
				ОВ		006				3	6098																
					TD	007					625																
				ОВ	S	007	5			3	6245																
					TD	010					626																
				08		010					6260																
					TD	012					627																
				ов		012					6267																
					TD	015					627																
				08		015					6268 620																
				0B	TD	020 020					6198																
					TD.	020					609																
				08		025				-	6090																
				ОВ		029		1	502	-	6010		76					15	134								
					To	030		•			601																
				OB		030				3	6010																

FERENCE IV ID. NO.	COOE	LATIT	1/10	DNGITUGE S	MARSDEN SQUARE	IGM		CRUIS		TOR'S ATIDN IMBER		DEPTH TO BOTTOM	MAX. DEPTH OF 5'MPL'S		WAV SERVA		TH	ER C	LOUD			NODC STATION NUMBER
18502	! E1	3500	D N C	4800 W	113 58	09 03	238 19	68 E16	011			4206	03	26		1 2			3			
					-	ATER	WINO	BARO.	AIR TEMP	. °C		NO.			ו' 'ו	1 2		1   0	113	1	1	0011
					COL	DR TRANS. DI		METER (mbs)		WET	CODE	0.00	SPEC OBSERV									
					D1		SO8		-	BULB	-	-										
	MESSENGI		Τ –		1	30 20	308	207 2	39	206	7	18										
		NO.	CARD	DEPTH (m)	1 10	s */	SIGMA	-T SPECIF	C AOLUWI	. S	Δ 0 N. M.	sou	INO		PO	4-P	TOTAL.	NO.	2-N	NO 11	F1.0	
	HR 1/10	-			-			ANO	* ALY-XIO7	X.	103	∧£F0	CITY	O2 ml/l		01/1	µg + 0₹		01/8	NO3-N l/le - gu	51 O4-	
	1		570											-				-	-			-
	238	a .	STO OBS	0000	2396		2451	003	4326	00	00	153	36		1	1		1	I	-	l	1
	230	,	085	0000	2396							153										
			STD	0010		36107																
	002	,	OBS	0010		3626 36257																
			STD	0020		3626																
			OBS	0020		36257																
			obs	0026		36067																
			STD	0030		3626																
			OBS	0030		36258																
			obs	0048		36216																
			STD	0050		3627																
			OBS STD	0050		36267																
			OBS	0075 0075		3643																
			OBS	0084		36427																
			OBS	0094		36338 36415																
			STD	0100		3634																
			OBS	0100		36343																
			STD	0125		3634																
			OBS	0125		36336																
			STD	0150		3632																
			OBS	0150		36317																
			STD	0200		3627																
			085	0200		36274						,										
			OBS STD	0 <b>238</b> 0250	1598	36192	2669					1515	8									
			OBS	0250		3616																
			STD	0300		36157																
			OBS	0300		3602 36017																

REFERENCE																									
CTRY ID.	CODE	LATITU	301	LONGITUDE	SQL SQL	ISDEN JARE	STATION	TIME	YEAR		DRIGINA	TOR'S		DEPTH	MA) DEPT		WAY		$\neg$	WEA-	CLOU	D.			1
CODE NO.	10001	·	1/10	1/10	10°	11.		HR,1/10	ICAR.	CRUISE NO.		ATION	1	BOTTOM	OF	1 0	8SERVA			THER	CODS		- 1	NOOC	
318502	2 E1	3501	N	04803 W	113				1040	+		MBCK	-		3 MPL		HGT	PER 5	EA	COOE	TYPE A	w T		NUMBER	
					1113	WA		WIND	1968	E16				4389	03	28	_		2	Хl	0 3		- 1	0012	İ
						-	T	SPEED	BAR	U	ORY TEM		VIS.			CIAL									
						CODE	IMI DIR.	FORCE				W ET BULB	COD	OEPTHS	O8258.	VATIONS	i								
						DT	50 23	514	20	0 2	39	211	7	13											
	MESSENGE		CAR	0			1	1				$\neg \neg$	<u>'</u>	1	-		4-		,	_		,			
	HR 1/10		TYP		1 1	C	5 %.	SIGA	1- A N	SPECIFIC	VOLUM:	DY	Δ. M	. VELO		D <sub>2</sub> ml/		4-P	тот	A L-P	NO2-N	NO3-N	\$104-	51	5
							<del> </del>	-				X	103	1	CIII		μģ	- 01/1	μg	• 01/1	µg - α1/	µg + a1/1	μg - α1,	i pH	c c
	1	' '	ST	0000		396	3624	1	.					1			1						1	+	Ħ
	057	,	OBS			396	36241	246 246		0033	3360	00	00	153			,					'	1	1	1 '
			ST	0 0010	-	,,0	3624	246	1					153	37										
			OBS	0010			36240																		
			ST	0 0020			3625																		
	001		085	0020			36251																		
			ST	0030			3626																		
			085				36260																		
			ST				3632																		
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			SŤ				3631																		
			OBS				36310																		
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			ST				3629																		
			OBS	0125			36294																		
			ST: OBS				3628																		
				0150			36281																		
			5T1	0200 0200			3622																		
			ST				36223																		
			085	0250			3611	267		0014	172	059	4	1514	47										
			085	0270	15		36109	267	1					1514	٠7										
			OBS	0270			36081																		
			203	0270			36059																		

FERENCE EY IO. DE NO.	- SH		LATITUO	DE 1/10	LON	GITUOE LANGUE	MAR SQU			TION T		YEAR	CRU	5.6	ATOR'S STATION NUMBER		DEPTH 10 801107	1	MAX. DEPTH DF 'MPL'S		WAY ISERVA	TIONS		WEA- THER COOS	CLOL	€S		5	NOOC TATION UMBER
_	2 5	,	3500		04.5	300 W	113	++				1968	F1	6 01	a		4023		03	25			2	X1	0	3			0013
1850	2   C	1 !	3500	n )	040	000 W	1113	W A			WIND	-	1	_	MP. °C	T	NO.	7			ן' '	- 1							
								COLOR	TRAN	S. DIR.	SPEED	MET		DRY	WET	CODE	0.00	. 0	SPEC										
								CODE	(m)		FORC	_	$\rightarrow$	BULR	BUL8			,											
								DT	50	25	509	20	7	244	233	7	13	1											_
	11	SENGR	CAST ND.	C.A.		DEPTH Imi	1	tc		5 %.	SIG	1-AM		IFIC VOLI		ξ Δ Ο γΝ. Μ χ 10 <sup>3</sup>		LOC		O 2 mi	/ 1	04-P		01AL-P	NO2-		13-N - a1/1	51 O4-5	рН
																											i		
					TD	0000		384		29		68	00	3268	9 (	000		33											
		119	)	ОΒ		0000	2	384		287	24	68					15	33	35										
					TD	0010				28																			
				OB		0010				277																			
					TO	0020				25																			
		002	!	08		0020			-	250 190																			
				08	TD.	0030				30																			
				08		0030				299																			
					TO	0050				29																			
				08		0050				294																			
					TD	0075				42																			
				ОВ		0075				424																			
				S	TD	0100			36	646																			
				ов	S	0100			36	458																			
				S	TD	0125				44																			
				ОВ	5	0125			_	6439																			
				S	TO	0150			_	643																			
				OB		0150				6430																			
				_	TD	0200				529																			
				08		0200				5285																			
					TD	0250				520																			
				08		0250		607		199		: 40					1 6	51	<b>61</b>										
				08	5	0259	1	597	31	5189	26	669					1:	71	01										

FERENCE NY IO. DE NO.	SHIP	LATITU	1/10	LONGITU	DE 1/10	DRIFT	MARS SQU	OEN ARE		ION IGMT	TIME ) HR,1/10	YEAI		RUISE NO.		TOR'S SOITA SBM L	N	0 E P T I 10 80 T T O	OF	AX. PTH OF CPL'S	L	BSERV	AVE /ATION		WEA- THER COOE	CLOU	S	\$1	OOC ATION JMBER
18502	E1	3501		04803		1	13	58 WA	09 (	04	179 WINO	196	- RO	E16	014 IR TEM	P. °C	vis.		7 (	SPEC	32	3	1 1		×1	0 3		 0	014
							Ì	CODE	TRANS (m)	23	FOR	CE U	ETER nbs)		RY ILB	236	9	OEPTH	085	SER"/	A TION:	5							
	MESSENG			_					30	23	1214	2 2	_			-	ž ∆ o	1				1		Τ.				 	
	TIME HR 1/10	및 NO,	TYP		PTH (	(m)	ŧ	$\mathcal{L}$	s	٠/	\$1	G M A = 1		ANOMA			X 103	VIII.	LOCIT		O 2 ml		PO 4 - P		01AL-P	NO2-N		- a1/1	pl
	17	9	51 089		000			424 424	36: 36:	36 359		462 462	(	00 33	1305	(	0000		345										
	•	-	51		010		-		36		-							•											
			OBS	5 0	010	)			36	320																			
			S1	0 0	020	О			36	34																			
	00	1	083		020					340																			
					030				36																				
			OB:		030					275																			
			OB S		03					227																			
			OB S		043					349																			
			51		050				36																				
			OBS		050					289																			
			51		07! 0 <b>7</b> !				36	340 340																			
			0B3		100				36																				
			OB:		100					462																			
					129				36																				
			OBS		125					420																			
			OBS		136					369																			
			51		150				36																				
			083		150					398																			
			51		200				36																				
			OB:		200					262																			
			OB:		244		1	601		182		667						15	5160	)									
				-	25(		•		36		_	'						-											
			OB:		250					168																			
			083		271					132																			

	ID.	SHIP	LATITU		LON	GITUOE 1/10	DRIFT	MARS	ARE		ON T		YEAR	CRL		ATOR	ON.	-	TO TIOM	DEP' OI S'MP	TH			TION		WEA- THER CODE	CLOU	ES			NODC STATION NUMBER
-+-	-	E )	2502	1/10	04.0			10"	-	-	-	4R.1/10	1060	+	+-		, LK	+	_	3 M7	_	2.2	1-1	7ER :			TYPL A			-	0035
318	502	CI	3502	1%	046	301 W		113	58 WA		04 2	WIND	1968	-	AIR TE		- 1	-1	297	0:	3	32	3	3	- 1	ХÌ	0 13	• 1		1	0015
									COLOR	TRANS	DIR.	SPEED OR FORCE	1,000	R	DRY BULB	W E	T C	VIS.	NO, OBS, EPTHS	OBSE	PEC IA										
								İ	DT	SD	26	509	21	2	240	23	5 7	7	13				1								
	- 1	MESSENG TIME HR 1/10	NO.	C.A TY		DEPTH I	m)	ī	*c	s	٠/	SIGA	AA-T		CIFIC VOLU		₹ ∆ NYO X I	. M.	SOU VELC	CITY	0	2 m1/1		O4-P		fA L=P = 01/I	NO2-1		103-N g - 01/1	\$1 O4\$ µg - al/	
					T.D.	0000	`	7,	. 1.0	26.		364		0.0	2200	_	000		1.57							Ì			ļ		
		23		OB	TD	0000			10	363 361		246		U	3290	1	000	0	153												
		23	7		o TD	0010		2.	110	361		240	90						153	342											
				08		0010				-	160																				
					TD	0020				36																					
		0.0	1	OB	S	0020	)			363	339																				
				S	TD	0030	C			363	31																				
				OВ		0030				363	306																				
					ΤD	0050				36																					
				OB		0050				36																					
					TD	0079				36;																					
				08		007				36																					
					TD	0100				36:	-																				
				08		0100				36:																					
					TD	0129				36																					
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					TD	0150				36	-																				
				OB		0150				36:																					
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				OB		0200				36	_																				
				OB		0248		16	503		180	266	5 7						151	161											
					TD	0250				36																					
				08 08		0250					180 149																				

C TR	FEREN	10. NO.	SHIP	LATITU	IDE 1/10		GITUOE	DALFT	sou	SOEN IARE	STATIO	ITM		YEAR	CRUISI NO.		ATOR'S	N	DEF	0	MAX. DEPTH OF S'MPL"	۱ ۱	OBSE	VAVE RVATI	SNO	WE.	R	CLOUD CODES			NOOC STATION NUMBER	
-	+	502	61	3502			304 ¥	+	113	1	09 0	_	-	1968	E16	<del>                                     </del>			329		03	_	-		X 31	_	_		-		0016	1
1 3	Ib.	302	CI	3302		046	, U -4 P	1	1113	WAT		_	ONIN		-	AIR TEA			Υ		0.5	3.	2  3	3  3	1	X 2	.	0   3	l		0016	l
										COLOR			SPEEC	MET	)•	DRY	WET	—   VIS.	9 08	B5.	SPE	CIAL										
										CODE	(m)	DIR.	FORC	1 1 1		UL8	BULE		DEP	THS	OBSERV	A IIO	"									
										DT	SD	23	508	20	1 2	46	236	5 7	12	2												
			MESSENG TIME HR 1/10	NO.	C A TY		OEPTH	(m)	,	۳۵	5	٠	SIG	MA+T		C VOLU		≨ ∆ 0 DYN. ∧ x 10 <sup>3</sup>		VE LO		02 m	1/1	PO4		107AL-		NO2-N ug - nl/l	NO3-N μg - α1/I	SI O4-		000
											-																		i			
				_		TD	000			400	363		24		003	260	1 (	0000		153												
			05	8	08		000		2	400	363		24	69					1	153	40											
					- S	TD	001				363																					
						5 <b>7</b> D	001				363 363																					
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			00			TD	003				363																					
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					OB.	s	007	15			362																					
						T D	010				363	2																				
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						TD	012				363																					
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						o TD	025		,	595	362 361		26	47	003	4557	, ,	589	,	151	6.0											
					08		025			595	361		26		001	4 22 1	, (	1269		151 151												
					OB.		027		1	,,,	361		20						1	101	77											
						-	-																									

IO.	COOE	LATITU	1/10	LONG	SITUDE 'L/10	DR8FT INDCT®	M ARS			GMT		YEAR	ORIO CRUISE NO.	STATION STATION NUMBE	,	OEPTH TO BOTTOM	DEPTH OF S'MPL'	085	WAVE SERVATIO		WEA- THER CDDE	CODE	5	\$1	NODC NOTATION UMBER
BS02	E1	3500	N	048	00 W		113	58	09 1	05	20 1	968	E16 0	17	4	297	02			3	×1	1	1		0017
									TER	, -	VIND	BARC	4 10	TEMP C	1	NO.	-		1''	, ,	^1	1013			3017
								COLO		DIR.	SPEED	METE	A ORY	WET		OBS. DEPTHS		CIAL /ATIONS							
								CODE	+	-	FORCE	(mbe	_	-	-										
		· · · · ·	, .					DT	SD	23	511	186	256	239	7	12									
	MESSENGE TIME HR 1/10	or NO.	CAI		DEPTH I	n i	1	tc	5	·/	SIGM	A-T	SPECIFIC VO		₹ △ D DYN. A4 x 10 <sup>3</sup>		DCITY	0 z ml/l	PO4-		DTA L - P /g - E1/I	NO2-N µg + at/l	NO3-N		рН
																								-	
	'		<u>S</u>	ro '	0000	1	24	+04	36	36	246	8 '	00327	58 C	000	150	341		J	1			1		
	120	)	083		0000		24	+04		356	246	8				150	341								
			_	ΤĎ	0010				36																
			OB.		0010					331															
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	002	2	08		0020				36:	316															
				ĪD	0030				36:																
			0B	5	0030	)			36	326															
			0B:	S .	0030	1			36; 36;	326 281															
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			OB: OB: S: OB: S: OB:	5 T 0 S T D S	0030 0038 0050 0050 0075 0075 0100				36: 36: 36: 36: 36: 36: 36:	326 281 311 311 30 299 33															
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ETRY IO. CODE	LATITUDE	/10	NGITUDE 11/10		SDEN JARE	(	ION TI		YEAR	CRUISE NO.		TOR'S	4	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL"		DBSERV	VE ATIO		WEA THER COD	000	S	5	NOOC TATION NUMBER
318502 E1	3501	N 04	802 W	113			5 1	179 1	968	E16				3840	03	20	5		2	X1	0 3			0018
					WA	<del>,                                     </del>	+	SPEED	BARG	, F—	AIR TEA		VIS	NO. OBS.	SPE	CIAL								
					COLOR	TRANS.	DIR,	FORCE	METE		DRY	WET	COOL	DEPTHS	OBSERV	A TION	1S							
					DT	50	25	517	179	9 2	67	239	7	12			┥							
MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (	m) 1	τ .	+	٠4.	SIGM	1	SPECIFIC	VOLUALITATION OF THE PROPERTY	ĄŁ .	€ ∆ D N, M X 10 <sup>3</sup>	501	UNO	O 2 m		PO 4-		101AL-1	NO2-1		\$1 O4-\$1 yg - at/	
												$\Box$												
·		STD	0000	_	446	363		245		003	4280	0	000	153										
179	(	OBS	0000		446	363		245	2					153	350									
		STO DBS	0010			362																		
	,	STD	0010			362 363																		
001		OBS	0020			363																		
001	•	STD	0030			363																		
	(	OBS	0030			363																		
		STD	0050	)		363																		
	(	OBS	0050	)		363	01																	
		STD	0075	5		362	29																	
	(	OB S	0075			362																		
		STO	0100			363																		
	(	DB S	0100			363																		
		STO	0125			363																		
	(	OBS	0125			363																		
		STO	0150			363																		
	(	OBS	0150			363																		
		STO	0200			362																		
	(	085	0200			362																		
		STD	0250			361																		
		DBS DBS	0250		574	361 361		266	_						155									

FERENCE Y ID.	4000	LATITU	DE 1/10	FUNCITUDE FINE	MARSI SQUA	A.R.E.	STATION IGMT		YEAR	CRUISE NO.	GINATO STAT NUM	ION	DEP	1 0	MAX. DEPTH OF 'MPL'S	085	WAVE ERVATION		WEA- THER CODE	CLOUE	5	\$	NODC TATION UMBER
1850	2 E1	3500	N	04800 W	113	58 0	9 05	238	1968	E16	119		438	9	03	28		2	X1	0 3			0019
						WAT		WIND	BARC	4.19	TEMP.		NO			<u> </u>	'	, –	, -		,		
						COLOR	TRANS. OIR.	SPEED OR FORC	METE	R DR		ET CO	3 000	s. 1	SPEC IA BSERVAT								
						DT	SD 23		19:	3 244	2	33 7	12										
	MESSEN TIME	of NO.	CAPE		T	*c	s *4.	SIG	MA-T	SPECIFIC N		X 10 ∑ ∆	M	SDUN		2 m(/)	PO4-		FOTAL=P µg · a1/1	NO2-N ug - at/l	NO3-N 1/10 - Bu	\$1 O4-\$1 µg - 01/1	ρН
				2000			24.22			0000		0.00											
	2.0	0	STI			+32	3633	24		0033	//1	000		534									
	23	8	085 ST	0000	24	+32	36326 3633	24	5 /				1	534	. /								
			085	2010			36326																
			51				3611																
	0.0	1	OBS				36106																
	.,,,	1	ST				3631																
			OBS				36308																
			ST				3612																
			OBS	0050			36121																
			ST	0075			3629																
			OBS	0075			36286																
			ST				3634																
			085	0100			36336																
			ST	D 0125			3633																
			OBS	0125			36328																
			ST	D 0150			3632																
			085				36318																
			ST	D 0200			3624																
			OBS				36237																
			ST				3616																
			08.5	0250			36155																
			OBS	0271										515									

PEFER CTRY CODE	ID. NO.	SHIP	LATITU	1/10	LONGITUDE 5		SDEN JARE		STATION (GA	AT)		YEAR	CRUISE NO.		ATATE STATE	NC	1	DEPTH TO OTTOM	MAX. OF OF S'MPL"	·	OBSI	WAV ERVA	TIONS		WEA- THER CODE	CLOU	5		NODC TATION NUMBER	
31	3502	F 1	3501		04803 W	113	58	0		-		1968	E16	0.2	0		4	371	03	_	8		$\rightarrow$	2	X1	0 3			0020	
			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			,	WA			_	IN D	BAR		AIR TE			ή	NO.	<u> </u>		Π,	'	'				,	'	•••	
							COLD		RANS. O	IR.	SPEED OR FORGE	MET	ER	ORY BULB	BU		2. ]	OBS. DEPTHS	OBSERV	/A TIO										
							DT		SD 2	4 :	507	18	3 2	39	23	3 7	1	12												
		MESSENG TIME HR 1/10	CAST NO.	CAR		1	i 'c		s *4.		SIGA	v a - T		C VOLU		\$ ∆ ! DYN. x 10	Μ,		OCITY	02	ml/l	1	4-P - a1/I		TA L-P g = q1/l	NO2-1		\$1 O4=5 yg = 01/		9
																								Г			T			Т
				` s1	D 0000	2	423		3634		246	50	003	344	2	0000	0	153	345											
		05	9	OBS	0000	2	423		3633	6	246	50						153	345											
				51					3634																					
				083					3633																					
				51					3627																					
		00	1	OB S					3627																					
				51					3632																					
				083					3632																					
				51					3628																					
				OBS					3627																					
				51					3627																					
				083					3626																					
				S 1	_				3632																					
				083					3631																					
				S 1					3631																					
				OBS					3630																					
				51					3630																					
				083					3629																					
				51					3622																					
				OBS					3621																					
				S 1					3612																					
				083					3611																					
				083	0272	1	547		3 <b>6</b> 09	8	26	73						151	147											

ID, NO.	SHIP	LATITU	DE 10	NGITUDE	MAR SDU			ION TI	,		JISE	STATION NUMBER	N	DEPTH TO BOTTON	MAX. DEPTH OF S'MPL"	D85	WAVE ERVATION	5 T	EA- HER ODE	CLOUD		ST	IODC ATION JM8EP
502	51	3500		800 W	1	58					16 02			200		+	101 101				1		
302	CI I	3300	N   0-	1000 W 1	1113	WA			10 I			MP. °C		389	03	24	1 1	3   >	(1	0 3		0	021
						COLOR	TRANS	1	SPEED	BARO- METER	DRY	WET	VIS	NO. 085.	SPE	CIAL /ATIONS							
						CODE	161	DIK.	FORCE	(mbe)	BULB	BULE	1	OBS. DEPTHS	OBSERS	7 110143							
						DT	SD	23	508	179	244	228	3 7	15									
	MESSENGR TIME	of NO.	CARD TYPE	DEPTH (m1	т	c	2	٠/	SIGMA		CIFIC VOL		₹ ∆ D DYN. M.		UND	O2 ml/l	PO4-P	101A		NO3-N	NO3-N ug - 01/1		рН
-	HR 1/10	-			-				-			+	¥ 10°	-	-		-	1	-		pg - 0.71	-	
- 1		1 1	6 T D	2000			1		1			_		!				1					
	118		STD	0000		419	362		245		3363	8 (	0000		344								
	116	5	STD	0010	2	419	362	293	245	8				15.	344								
			085	0010			362																
			STD	0020			363																
	001	ı	OBS	0020			36																
			STD	0030			363																
			085	0030			36	311															
			085	0033			362	282															
			085	0036			361	313															
			085	0043				272															
			STD	0050			36																
			085	0050			36:	312															
			STD	0075			363	_															
			085	0075			36	322															
			OBS STD	0075 0100			36: 36:	322 34															
			OBS STD OBS	0075 0100 0100			363 363 363	322 34 341															
			OBS STD OBS STD	0075 0100 0100 0125			36: 36: 36: 36:	322 34 341 36															
			OBS STD OBS STD OBS	0075 0100 0100 0125 0125			36: 36: 36: 36: 36:	322 34 341 36 355															
			OBS STD OBS STD OBS STD	0075 0100 0100 0125 0125 0150			36: 36: 36: 36: 36: 36:	322 34 341 36 355															
			085 STD 085 STD 085 STD 085	0075 0100 0100 0125 0125 0150 0150			36: 36: 36: 36: 36: 36:	322 34 341 36 355 32															
			085 STD 085 STD 085 STD 085 STD	0075 0100 0100 0125 0125 0150 0150 0200			36: 36: 36: 36: 36: 36: 36:	322 34 341 36 355 32 322															
			085 STD 085 STD 085 STD 085 STO 085	0075 0100 0100 0125 0125 0150 0150 0200			36: 36: 36: 36: 36: 36: 36: 36: 36:	322 34 341 36 355 32 322 24															
			OBS STD OBS STD OBS STO OBS STO	0075 0100 0100 0125 0125 0150 0150 0200 020			36: 36: 36: 36: 36: 36: 36: 36: 36:	322 34 341 36 355 32 322 24 241															
			085 STD 085 STD 085 STD 085 STO 085	0075 0100 0100 0125 0125 0150 0150 0200		560	36: 36: 36: 36: 36: 36: 36: 36: 36: 36:	322 34 341 36 355 32 322 24	267						152								

ID. ND.	SHIP CDDE	LATITU	IDE 1/10	1	IGITUDE	DRUFT	MARS SOU.	DEN ARE		TION TI IGMTI		YEA	(CA	O UISE VO.	5	ATDR'S TATION UMBER	$\exists$	DEPTH TO BOTTON	DEPT OF S'MP	H OF	SERV	A VE /A TIO		WEA THE	C	ODES	,		NODC STATION NUMBER
502	Εl	3501	N	04	803 W		113	58	_		77	196	8 E	16	022	?	-	4297	03	26			3	X1	0	13			0022
		-		,		' '	[	WA	TER	_ 'w	IND		ARO-	À	IR TEA	4P. °C	VIS.	NO.	١ .,	ECIAL	٦'						•		
								COLDR	TRA N	DIR.	SPEEL OR FORC	P .	ETER mbs)		RY JLB	WET BULB	CODE	OBS. GEPTHS		VATIONS									
								DT	SD	21	508	1	69	26	1	244	7	14	!		Ι.								
	MESSENG TIME HR 1/11	- NO		ARD 1PE	DEPTH (	mì	ŧ	°c	,	٠/	şıg	MA-			VOLU/	5°   D'	∆ D. N. M. 10 <sup>3</sup>		OCITY	D <sub>2</sub> ml/		PO 4-		†OTAL – / ۵۱ - ور		- 12N - a1/1	NO3-N 99 - 01/1	\$1 O4-	
	DR 1/1	-	-						+		-		_	-			_			<del></del>	$\top$		$^{+}$		$\vdash$		_		1
		1	ا 5	To	0000	)	24	448	36	32	24	52	0	0 3 4	258	3 0	000	15	351	I	- 1		- 1		1		1	l	'
	17	7	08		0000	)	24	448	36	322	24	52						15	351										
				TD	0010				36																				
			08		0010					310																			
				TD	0020				36																				
	00	1	08		0020					333																			
			08	TD	0028				36	272																			
			08		0030					292																			
			08		003					321																			
				TD	0050				36																				
			08		005					311																			
				TD	0075	5			36																				
			08	S	007	5			36	346																			
			S	TD	0100	)			36	36																			
			08	S	0100	0			36	362																			
			S	TD	0129	5			36	33																			
			08		0129					330																			
				TO	0150					30																			
			08		0150					302																			
				OTO	020				36																				
			08		0200					182			_																
				TD	0250			549	36			75	U	0 1 3	866	0	502		144										
			08		025		1	549		124	26	75						15	144										
			08	35	027	2			36	112																			

ID, NO.	SHIP COOE	LATITU	DE 1/10	LONG	1/10	10.	PSDEN UARE	MO	TION	TIME I HR.1/10	YEAR	CRUIS NO.		NOTAR	NC	DEPTH TO BOTTON	DEPTH	08	WAVE SERVATI	ONS	WEA- THER CODE	CODES		S	NODC TATION IUMBER
502	E1	3500	N	048	00 W	113	58	09	07	001	1968	E 16	02	3		4361	03	23		3	X 1	0 3			0023
							W	ATER		WIND	BAR		AIR TE			NO.			1''	1 -	, A I	1 0 13	1	, ,	0023
							COLO		S. DIR	SPEED OR FORC	MET	ER	DRY BULB	BU!		000	CACCENT	CIAL 'ATIONS							
		,					DT	SD	20	517	18	3 2	39	22	2 7	14			1						
	MESSENGI	CAST V NO.	CAR		DEFTH Im1		ı *c			SIC	MA-I	SPECIF	ic vota	IM E	₹ΔD	so	ONU		. PO.	-P T	OTA L-P	NO <sub>2</sub> -N	NO3-N	SI O4-SI	
ļ	HR 1/10	T NO.	149	'E						_   310	m ~ = 1	ANO	MALY-X1	107	X 103		OCITY	02 ml/	νg •		ug = 01/1	μg - σ1/l	μg - α1/I	ug + at/1	pН
- 1		1 [																							-
	00.		ST		0000		431	36		24		003	383	6	0000	15	347		,	'				,	•
	001	ı	OB S		0000	2	431		313	24	56					15	347								
			OBS		0010				30 301																
			51		0020				301 301																
	001	ı	OBS		0020				۵۷ 318																
		-	ST		0030				26																
			OBS		0030				264																
			OBS	5	0034				214																
			OBS	5	0044				305																
			ST		0050			36	29																
			08 S		0050			36	288																
			S T		0075			36	31																
			085		0075			36	313																
			ST		0100			36	34																
			OBS		0100			36	343																
			ST		0125			36	35																
			OBS		0125				354																
			ST		0150			36																	
			OBS		0150				322																
			ST		0200			36																	
			OBS		0200	_			271																
			ST		0250		584	36		260		001	4496	5 (	0604	15									
			085 085		0250	1	584	36	143	26	68					151	155								

CTNY ID.	SHIP CODE	LATITU	DE 1/10	LONGITE	1/10	NAI SOI	SDEN JARE		GM1	TIME ) HR,1/10	YE A	NR.	CRUISE NO.		TOR'S ATION UMBER		DEPTH 10 801104	DEP	PTH OF		WAVE SERVAT	IONS	1	WEA- THER CODE	CLOU CODE	s		\$1	NODC ATION UMBER
318502	E1	3501	N	04803	3 W	113	58			057	1	58	E16	024			4206			23	1	3	_	X 2	0 3	_			
							WA1	ER		MIND	1	ARO		IR TEM		T	1.0	1		-		1 -		^ 2	0 13	1		1	0024
							COLOR	TRANS.	DIR	SPEE OF FOR	D W	AETER (mbal	1 6	ORY JLB	WET	COD!	OBS.	0.000	SPECIA ERVAT	IDNS									
							DT	SD	18	513	3 1	76	2:	39	233	7	13												
1	MESSENGE TIME o HR 1/10	CAST NO.	C AR TYP		PTH (m)	1	20	s	٠/٠.	\$10	SMA-	1	SPECIFIC	VOLUM ALY-XIO	,   0,	∆ D N, M x 10 <sup>3</sup>		ORUO OCITY	0	2 ml/l	PO 4		TOTA		NO2~N	NO3-		1 O4-Si	рН
]												Т									1								
	057		ST		000		430	363			•56		0033	3865	00	000	15	346	,		1	'		•			,	'	
	057		0BS		0000	2	430	363		24	•56						15	346											
			085		010			363																					
			ST		020			363 363																					
	002		085	_	020			363																					
	- 0 2		ST		030			363																					
			OBS		030			363																					
			OBS	0	044			362																					
			ST	D 0	050			363																					
			OBS		050			363	22																				
			ST		075			363	1																				
			obs		075			363	05																				
			ST		100			363																					
			08 S S T		100			363																					
			085	-	125			363																					
			ST		125 150			363																					
			OBS		150			362 362																					
			ST		200			362																					
			OBS		200			361																					
			ST		250	1	564	361		26	71	C	0014	201	0.6	01	15	140											
			OBS		250		564	361		26				201	00			149											
			085	0	271			361		_ •	-							/											

FERENC Y ID	١.	SHIP CODE	LATITU			GITUDE	DALFT	SOF	SDEN		ION T		EAR	CRUI	S E	STATION	4	DEPTH TO BOTTON	DEPT OF	H 01	WAV SERVA	TION		WEA- THER CODE	CD	DUD			NOE	10N
- "	·			1/10		1/10	-	10"	11.	MO	DAY	IR,1/10		ND	4	NUMBE	R	201107	S'ASPL	L°S DIR	HGT	PER	SEA	CODE	2461	AMI		_	NUM	HEK
185	02	E1	3500	N	04	W 008	1	113	58	09 (	7 :	118 11	968	E1	6 02	5		4361	03	20			3	xı	0	3			00.	25
									WA	TER		WIND	BARC	)- L	AIR 18	MP. ℃	VIS	NO.		ECIAL	]									
									CODE	+	DIR	SPEED ON FORCE	M ETE (mbs	1	DRY	T3W BJU8	COD	DEPTHS	Carea	VATIONS										
									DT	SO	18	508	173	3 .	250	233	7	13												
		MESSENGR TIME C HR 1/10	CAST NO.	CA TY		DEPTH	(m)	7	€	5	٠,,	SIGMA	\-T		FIC VOLI		₹ △ D 24N. A x 10 <sup>3</sup>	A. 1000	DCITY	02 ml/		- of/		0 TA L - P 19 - 01/1	NO2		NO3-N ug - ot/l	51 O4~		рН
					TD 🗋	0000				36:	33							1			,									
		118		OB.		000				363																				
					TD	001				363																				
				OB.		0010				363																				
					TD	002				36:																				
		001		OB.		0020				363																				
				OB.	ĪD	0030				363																				
				OB		0030				362																				
				-	TD	0050				361 362																				
				08		005				362																				
					τo	007				363																				
				ОВ		007				363																				
					ŤD	0100				363																				
				OB.	s	0100				363																				
				S	10	012	5			363	35																			
				QB:	S	0125	5			363	352																			
				S	TO	0150	0			363	36																			
				OB:		0150				363	362																			
					T D	0200				363	32																			
				OB:		0200				363	321																			
				_	ŤD	0250				361																				
				OB:	s	0250	0			361	52																			
				ов:		0270				361																				

_																											
BEFER	ENCE	SHIP				DCTR	MARS		STAT	DN TI	IME			DRIGINA	TOR'S		OEPTH	MAX, DEPTH	Ι.,	WA			wEA-	CLOUD			NODC
CODE	NO.	CODE	LATITU		LONGITUDE					GMT)		YEAR	CRUISE NO.		ATION		BOTTOM	Q.F		DBSERVA			THER	CODES	1		TATION
			-	1/10	1/1	-	10	11-			R,1/10		+		MOLE			3 MIL 3			PEN S	-		TYPE A AFT	-		
31	<b>B</b> S02	E1	3501	N	04803 W		113		09 0			1968		026			4297	03	21	<u>L</u>		3	X1	0 3		1	0026
								WA	,-	W	SPEED	BAR	) · · · ·	AIR TEMI		VIS.	ND. 085.		CIAL								
								COLDR	TRANS.	DIR.	OR	1-1-1		DRY ULB	BULB	CODE	DEPTHS	DBSERV	ATION	15							
								DT	SD	16	517	14	_	56	239	7	14	<del> </del>		-							
									100	10	7.	1 4 4	, ,	30		1.	177	<del></del>				_	т				
		MESSENG		CA		lm I	T	℃	5	-4.	DIS	MA-I		VOLUM		E A D		UND	O2 m1		O4-P			NO2-N	N03-N		pН
		HR 1/1		11	rt								ANON	ALI-110	$\perp$	x 103	VEL	DCITY		פע	9 + a1/I	ود	- 01/1	µg - 01/1	yg - al/l	μg = q1/l	
																							- 1				İ
		•		S	TD 000	0	24	446	363	2	24	52	003	4215	0	000	15:	350									
		17	8	OB:			24	446	363		24	52					153	350									
					TD 001				363																		
				OB:					363																		
		0.0			TD 002				363																		
		00	1	OB:					363 362																		
				OB:					362																		
				OB:					362																		
				OB:	_				362																		
					TD 005				362																		
				OB:	-				362																		
				S	TD 007	15			363	0																	
				OB:	s 007	15			363	04																	
					TD 010				363																		
				08					363																		
					TD 012				363																		
				08:					363																		
					TD 015				363																		
				OB:	S 015 To 020				363 362																		
				08:	-				362																		
					TD 025		1 (	558	361		26	71	001	4237	0	606	15	146									
				OB:				558	361		26		501	-251	.,	500		146									
				OB:			1.	, , 0	360		20																
				V 0		-			,,,,																		

REFERENCE SHIP CODE LATITUD		DE 1/10	LONGITUDE 1/10		E /10	INDCT	MARS SOU	ARE	ST	IGMT	ION TIME GMTI		/E AR	CRUIS NO.			ON		DEPTH TO OTTOM	DEPTI OF S'MPL	н		WAVE SERVATIONS HGT PER SEA			WEA- THER CODE	ÇC	OUD			NODC TATION NUMBER	
318502	F1	3500		048	_		1	113	1	0.9				968	F16	02	7		4	297	03		21	Ť		3	x 2	1	3			0027
310302		3300	- 1	0.0	• •	"	1 *	ا د	WAT	_	1	WINE		BARG	_	AIR TE			╁	NO.	_			1 1	- 1	- 1		, ,			,	
									COLOR				E E D	METE	2	DRY	WE	I co		OBS. DEPTHS	OBSER	VAT										
									CODE	lm.	,	FC	ACE	(mbi	_	BULB	BUL		-+-													
									DT	SI	16	50	14	14	9   2	11	20	6 7		13												
	MESSENGE TIME HR 1/10	CAST NO.	CAS		DEP	TH tr	n)	Ţ	٣		s ·4.		SIG M	A-T	SPECIF	MALY-X	M.E 07	₹ △ 0YN. x 10	М. 3		DCITY	0	2 ml/l		4-8 • 01/1		TA L - P	۲O: ۱۹۰		NO3+N µg + ot/l	21 O4-5	
	239		SID		-		) '	24	442 3		3633		2454		0034029		9 '	0000		15:	349			1					1	,		
							)	24	442	36330		0 245		4						15349		49										
				T D		10					533																					
			08			10					6330	)																				
				TD		20					629																					
	001		08			20					5293	•																				
				TD		30					528																					
			08			30					6281																					
			OB:			)44					6363	,																				
			-	O		050					633																					
			08:	S TD		) 5 C					6328 641	5																				
			08:			775					6413																					
				J TD		100					635	,																				
			08			100					6345	,																				
				Tp		125					535	•																				
			08			125					5354																					
				Tp		150					633																					
			08			150					6331	t																				
				TD		200					624																					
			08	S	02	200	)			3	6241	l																				
			S	TD	0.	250	)	10	500	3	616	- 2	266	6	00	1474	1	061	0	15	160											
			08	\$	0;	250	)	1	600	3	6158	3	266	6						15	160											
			08	S	0.2	268	3			3	6128	3																				

REFEREN	SHIP			FONGITUDE POOR			MAR		STATION TIME					ORIGINATOR"S				EPTH	MAX. DEPTH		WA			WEA-	CLOU			NO		
	D. CODE	LATITL					sou			GMTI		YEAR	CRUI					TO M	OF.			A TION		CODE	CODE		i i	MUN		
-	$\rightarrow$		1/10	-	1/10	-	10*	1.	MO I	DAY HR.1/1			- NO	' '	NUMBER		-		2,W br.2	DIR.	HGT	PER	SEA		TYPE A A	17				
3185	502 E1	3501	. N	048	303 W		113	58		8 (		1968	E1				42	97	03	21	_		3	X2	0 3		-	00	28	
								WA	TER	٧	VIND	BAR	o- L	AIR TE	MP. °C			10.	SPEC	CIAL	1									
						COLOR	TRANS.			1		DRY W		T COD	DE	PTHS	ORSERV		5											
								DT	SD	14	514	4 12	9	239	22	2 7	1	6			7									
	MESSENG TIME HR 1/1	of NO.	AST CARD IO. TYPE				т	*c	5 *4.		SIGMA-T			FIC VOLU		≨ △ D DYN. # x 10 <sup>3</sup>	۸. ا	VEF0		O <sub>2</sub> ml		PO4-P g - 01/1		DTAL-#	NO2-N µg - at/	NO3-1			ρН	500
		}																-			- 1		1	Į			1	- 1		11
			STD				_	434	-	3635		58	00 3 3 6 7 0		0	0000														
			OBS				2	434	36348 3634		24	58						153	348											
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			ОВ		001				36																					
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			08 08		002					133																				
				S To	003				363																					
			OB	-	003					798																				
			OB		003					357																				
			ОВ		003					233																				
				TD	005				36																					
			OВ	S	005	0			36	387																				
			S	1 D	007	5			36	33																				
			08		007	5			36	329																				
			S	TD	010	0			36	36																				
			OB.		010					359																				
				ΤD	012				36																					
			08		012					323																				
				TD	015				36																					
			08		015					308																				
				TD	020				36																					
			OB		020		,	E / O		220	٠.	7.0	00	1380		0593	,	161												
				TD.	025			548	36			75 75	00	1980	•	0593		151												
			0B 0B		025 027		1	548		129 087	26	175						151	144											
			06	J	027	0			30	00/																				

CIEY	ID. NO.	SHIP CDDE	LA TITUI	DE U	DNGITUDE 1/1/10	10°		STATION IGHT		YEAR	CRUISE	STATION NUMBER	DEPTH TO BOTTO	DEPT	1 185	WAVE SERVATIONS HUT PER 1	TH	E 5	N N	TATION LARGER
31	BS02	E1	3503	N 0	4801 W	113				968	E16 02		4206	03	18		3 X			0029
							W.A.		WIND SPEED	BARG			VIS DBS		ECIAL					
							CODE	TRAN' DIR.	FORCE	44 ETE		BULB :	DEPTH	OBSER	VATIONS!					
							DT	SD 15	518	10	8 239	222	12							
		MESSENGI TIME HR 1/10	V NO.	C A R D TYPE	DEPTH U	1) F	*c	5 *	SIGN	AA-T	SPECIFIC VOLU	. DAN	1.4	LOCITY	D <sub>2</sub> mi			N°3=N	5 114-51 10 - 94	рН
					2000			24.23	-								-			
		11'	٥	STD	0000		420 420	3632 36316	246 246		003350	1 00		344						
		11	,	SID		-	720	3632	2 - 0	10			17	7-4						
				085	0010			36316												
				STD	0020			3630												
		00	1	OBS	0020			36300												
				STD	0030			3628												
				OBS	0030			36281												
				STD	0050			3637												
				OBS STD	0050 0075			36370												
				085	0075			3633 36330									,			
				STD	0100			3633												
				085	0100			36333												
				510				3635												
				OBS	0125			36350												
				STO	0150			3633												
				085	0150			36330												
				STO			639	3627	266		001463	1 04		165						
				OBS	0200		639	36271	266	55			15	165						
				STD	0250			3617												
				OBS OBS	0250 0271			36172 36112												

_	RENCE	SHIP				MAR	SDEN	STAT	ION T	TAKE			ORIGINAT	08.2	DEPTH	DEI			VA VE	h I F	WEA	CLO			NO:	
BY BOE	ID.	CODE	LATITU	1/10	NGITUDE 1	10"		MO [ S			YEAR	CRUISE NO.		TION MBER	70 80110		) F		GHIFEE		THER	TTPE			STAT NU <i>H</i>	
21	8502	51	3501		803 W	113	-	09 0			1966	E16			4297	-		9	33,744	3	X.2	0		 	00	30
٠.	D302	.,	3201	N   04	1 K COO	1113	WA		_	WIND	BAR		AIR TEMP		NO	7		<u></u>	1 1	,	^4	0	J	,	00	30
							CDLOR		D19.	SPEEC	MET	ER C		WET COL	0.00	20.01	SPECIAL ERVATIO	NS								
							CDDE	(m.)	-	FORC				ULB	+	-		-								
					,		DT	50	17	511	09	8   2	50 2	17 7	14	-	-							 	_	
		MESSENG TIME HR 1/10	O ND.	CARD TYPE	DEPTH Imi	1	*℃	5	٠4.	210	T-AM	SPECIFIC	VOLUME ALY-107	¥ ∆ E DYN # X 10 <sup>3</sup>	Α	DUND	02	mb I	PO4~ yg = 01		OTAL—P Lg = ol	NO2- ug-0		\$1 Da~S		рΗ
			_	STO	0000		422	363		24		003	3652	0000		344										
		17	9	OBS	0000	2	422	363 363		24	58				15	344										
				STD	0010 0010			363																		
				STD	0020			363																		
		00	1	085	0020			363																		
			-	STD	0030			363																		
				085	0030			363	323																	
				085	0041			363	73																	
				510	0050			363	31																	
				OBS	0050			363																		
				STD	0075			363																		
				085	0075			363																		
				085	0083			362																		
				510 085	0100			363																		
				STD	0100 0125			363																		
				OBS	0125			363																		
				STD	0150			363																		
				OBS	0150			363																		
								362																		
				STD	0200																					
				085	0200			362	215																	
				085	0200			362	. 2																	

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EFEREN	Œ.	SHIB				E 5	MAR	SDEN	STA	ATION '	IIME	W5 4 6	L	ORIGINA	ATOR"		DEPTH	DEPTH		WA \	VE TIONS		WEA-		ODES			NODC	
	٥.	CODE	LATITU		LONG	SITUDE POR	2016					YEAR	CRL		TATIO		OT MOTTOR	0.5	1		PER S		CODE	1	LAMI			NUMBER	
-	10.			1/10		1/10	10.	1.	MO		HR.1/10		+					1	+	HOI	-+-	$\rightarrow$		t-	$^{-}$		-		
3189	02	€1	3500	N	048	00 W	113			08		1968	E	16 031			4389	03	18	, 1	ļ	3	X 1	0	13	l		0031	1
									LTER.	-	WIND	BAR		AIR TEA		VIS.	NO.		CIAL										
								COLO	TRAP		OR	7		DRY BUL9	BUL		DEPTHS	OBSERV	A TION S										
								DT	50	20	506	`		239	21	7 7	15			1									
			,					01	130	20	1300	10	$\perp$	237			1	l		Ц.		_							_
		MESSENGR	CAST	CAI		DEPTH (m)	1 .	r °c		s •/	916	MA⇔ī		CIFIC VOLU		Σ Δ o oyn, m		имо	O 2 ml		04-P		TA L-P		12-N	NO3-N	SI 04-		S.
		HR 1/10	ND.	14	PE	001111 007					1.0		۱ ۸۱	IOM ALV-EI	۰′	x 103	VEL	OCITY		μģ	- 01/1	P1	0 - 01/1	ηĝ.	- at/l	μ <b>g - α1/</b> 1	yg - ol	4	C
	ı																1					П							
	ı		1	5	TD 1	0000	٠,	414	36	531	24	61	00	33345	5 (	0000	15	343 '		- 1						,			,
		239	)	OB:		0000		414		5314							15	343											
				5	TD	0010			36	532																			
				0B	5	0010			36	5315																			
				5	T D	0020			36	531																			
		001		OB:	S	0020			36	5312																			
				5	TD	0030				524																			
				OB.	5	0030			3 (	5237																			
				OB.	S	0043			36	5351																			
					TD	0050				533																			
				OB.		0050				5334																			
				OB		0054				5276																			
				OB.		0066				5366																			
					TD	0075				536																			
				OB.		0075				5356																			
					TD	0100				535																			
				OB		0100				6353																			
					TD	0125				636																			
				OB		0125				5356																			
					TD	0150				635																			
				ОB		0150				6348 627																			
					TD	0200 0200				621 6265																			
				ОВ	5 T0	0250				0260 617																			
						0250				6171																			
				OB OB		0250	,	576		6136		69					15	156											
				UB	3	0209		, , , ,	٠,	0130	20	0 7					1,5	1,0											

REFERENCE CTRY ID. CODE NO.	SHIP	LATITU	DE 1/10	LONGITUDE '1/10	PRINT	MAR! SQU	ARE 1°	MO		) HR_1/10		R	CRUISE NO,	S	ATOR'S	٧	1 '	EPTH TO TTOM	MAX. DEPTH OF S'MPL'S		BSERV.	VE A TION		WEA- THER CODE	CLOU CODI	\$	NOOC STATION NUMBER
318502	E1	3500	N	04800 W		113	58	09	09	059	196	8	E16	03	2		40	23	03	18	_		3	X 1	0 3	- 1	0032
							WAI	ER		WIND		ARO		AIR TEA	MP. C	VIS		10.	SPEC	IAI	7						
							COLOR CODE	TRAN	S. DIR	. SPEE	1.77	E1Es mbs)		DRY ULB	W ET BULB	COD	sel U	BS. PTHS	OBSERVA		5						
							DT	SC	24	506	0	98	2	33	217	7	1	6			1						
	MESSENGR TIME HR 1,/10	및 NO.	C A R TYP		(m)	T	۵,		s •/	SIG	5MA~1	,	SPECIFIC	VOLU.	201	E △ D DYN. N X 10 <sup>3</sup>	۸. ا	SOU		O2 ml/		PO 4-P 9 - 01/		DTAL-P /g - o1/I	NO <sub>2</sub> -N		
			ST		0	2	408	36	30	24	62		003	3246	6 0	000		153			•						
	059	7	085	000	0	2	408	36	304	24	162							153	41								
			ST					36	30																		
			OBS						299																		
			ST						24																		
	00	l	OBS						244																		
			085						213																		
			ST	-					22																		
			08.9						224																		
			089						343																		
			ST						32																		
			085						324																		
			089						434																		
			OBS						283																		
			5 T	-	-				31																		
			0B5						314																		
			ST						34																		
			0B5	_					335																		
			51						32																		
			OB5						317																		
			ST						30																		
			OB5						302																		
			ST						23																		
			OBS						233																		
			ST						11																		
			OBS						114																		
			OB5	027	2	1 '	551	36	092	26	72							151	48								

REFERENC	E		1		= MAR	SDEN	TATZ	ION	TIME		T	RIGINA	TOR'S	-	DEPTH	VAT		w	AVE		WEA		1000	-	1	NDDC -
CTRY ID.	CODE	LATITU			SQ1	JARE		G V 1	)	YEAR	CRUISE	STA	ATION		TO	DEFTH		DBSER	VAT	ONS	THER	C	DDES		S	MOITATI
			1/10	1710	10*	1.	1		HR.1-1(		NO.		MBER			2 WLT	1-	DIE H	GT PE	+ -	^	117	EAPT		- +-	
31850	02 E1	3501	N	04802 W	1113	-		-	118	1968					4297	03		03		3	1   X1	0	3		1	0033
							ATER	-	WIND	BAR	0-	IR TEMA		- VIS	ND. OBS.		CIA									
						COLO	R TRANS.	DIR	FOR	1 1			RULA	CODE	DEPTHS	O85EPV	ZAT)	SNC								
						DT	SD	22	510		2 2	44	217	7	16			$\neg$								
	MESSENC	RCAST	CAR	n			1	_	1		SHEIR	VOLUM	, 5	- 0	100	UND		1	FO <sub>4</sub>	_ p	TOTAL	NO	10-N	NO <sub>3</sub> =N	SI Da=S	
	HR 1/1	V NO.	TYP		n)	1 10	3	•/••	112	GMA-T		417-X107	. 1 0	1 10 <sup>3</sup>		OCITY	0 2	mi/I	. 9 -		µg - 01/1		- at/1	PB - 01/1	pg = alv	
								_																		
	'		51		_	400	362	29	21	464	003	3113	0	000	15	339										
	11	8	083			400	362		2	464					150	339										
			S1				362																			
			OBS				362																			
	0.0	2	S1				362																			
	00	2	0B3				362 362																			
			083				362																			
			OBS				362																			
			51				362																			
			083	0050	1		362	206																		
			083	0069			363	331																		
			083				362																			
			Si				363																			
			083				363																			
			08				363																			
			S				363																			
			OBS				363																			
			51				363																			
			0B3				363 363																			
			0B				363																			
			51				362																			
			0B :				362																			
			S1			585	361			665	001	4816	0	599	15	155										
			08			585	361			665	001	-010	- 0	,,,		155										

ID. NO.	SHIP CODE	LATITU	DE LD	NGITUDE #120N	MAR! SOU		(	ION TI GATI		YEAR	CRUISE NO.		ATOR'S TATION UMBER	9	DEPTH TO BOTTOM	DEPTH OF S'MPL	082	WAVE ERVATION		THER CDDE	CODES		S1	NDDC TATION UMBER
502	E1	3503	N 04	758 W	113	57	09 0	9 1	80 1	968	E 16	034		4	206	03	03		3	X 1	0 3		- (	0034
	- 1					WA	TER	V	VIND	BARC		AIR TEA	4 P. °C.	vis.	ND.	CP	ECIAL							
						COLOR	TRANS.	DIR.	SPEED	METE		DRT	WET BULS	CODE	OBS. DEPTHS	Decker	VATIONS							
							-		FORCE	-	-			7	1.2	-								
		, ,			,	DT	SD	24	506	122	2 2	44	228	- 1	13			_					1	_
	MESSENGE TIME	CAST	CARD	DEPTH UNI	,	*C	5	٠	SIGM	A - I		VOLUE ALT-110	J DY	△ D.		UND	D2 ml/l	PO 4-		OTA L-P	ND2-N	NO3-N	SI 04=Si	ρН
	HR 1/10		TYPE								ANUN	401-110	,	103	VEL	OCITY		µg - 0	1/1	- ۱/۱۰ - وبر	μg - σt/1	µg - 01/1	ug - at/1	
																							1	1
			STD	0000		426	363		246		003	3499	00	00		346								
	180	)	OBS	0000	2	426	363		246	0					15	346								
			STD	0010			363																	
			OBS	0010			363																	
			STD	0020			362																	
	00	1	OBS STD	0020 0030			362 361																	
			OBS	0030			361																	
			085	0044			363																	
			STD	0050			363																	
			OBS	0050			363																	
			STD	0075			363																	
			OBS	0075			363	37																
			STD	0100			363	35																
			OBS	0100			363	348																
			STD	0125			363																	
			OBS	0125			363																	
			STD	0150			363																	
			OBS	0150			363																	
			STD	0200			362																	
							24.	254																
			OBS	0200																				
			SID	0250			361	1																
						546		11	267	,					15	146								

REFERENCE	-	SHIP	LATITU	DE	LONGII	UDE HE	MAR	SDEN		TION TI	WE	YEAR	CRUISE	ORIGINA S1	TOR'S	_	DEPTH	1 6	MAX. DEPTH	08	WAVE SERVAT		TH		CLOUD			NODC
CODE ND		CODE	•	1/10		1/10	10"	10	MD	DAY H	P.1/10		NO.		UMBER		BOTTO	M S	'MPL"S	DIR.	HGT PE	ER SE	A CC	DE	TYPE AWA			NUMBER
31850	2	E1	3501	N	0480	3 W	113	58	09	09 2	39	1968	E16	035	,	].	4389	,	03	21		3	X	1	0 3			0035
	-	'				- '	,	WA			MND	BAR	`	AIR TEN	1P, *C	T	NO.	T	SPECI									
								COLDR	TRANS	DIR.	SPEED OR FORC	MET	ER	DRY IULB	WET	CODE	OBS. DEPTH	s	BSERVA	TIONS								
								DT	SD	26	516	12	5 2	39	228	7	14	$^{+}$	- It-									
	Γ.	AESSENC.	CAST				- T			-	1	1		c voru	Τ.	Δρ	1	LL.			-	4-P			NO2-N	NO N	S1 O4-	
		TIME	of NO.	CAI		1ml HT93C	1	, C	S	*/	SIG	M A +T		ALY-FIE	7 0	YN. M x 10 <sup>3</sup>		LOC		) mi/		a1/1	10191		μg - a1/1	NO3-N ug - ot l	ид - at	
	-  -	HR 1/10							+		-						+		+					$\dashv$				
				5	TD	0000	2	416	36	31	24	60	003	3459	) 0	000	15	34	44		1			- 1				1
		23	9	08:		0000		416		306	24			,,,,		•••	_	34	-									
						0010	_		36		_																	
				08	S	0010			36	306																		
				S	T D	0020			36	29																		
		00	1	08		0020				293																		
				_		0030			36																			
				08		0030				242																		
				08:		0037				171																		
				08		0045				331 32																		
				08		0050				321																		
						0075				27																		
				ов		0075				270																		
						0100			36	36																		
				OB.	S	0100			36	362																		
				S	TD	0125			36	33																		
				08	S	0125			36	332																		
						0150				33																		
				OB		0150				328																		
					TD	0200			36																			
				OB.		0200				279																		
						0250				17																		
				ОВ		0250				169																		
				OB	5	0271			36	091																		

		SHIP	LATITE	JDE 1/10	LON	GITUDI	10.5	MAR SOU	SDEN IARE	N.C	TATION	4 T I	ΛΕ .1/10	YEAR		UISE NO.		TOR' ATIO	N.		EPTH TO TTOM	MAX DEPTH OF S'MPL'	ł	OBSE	WAVI RVAT	IONS		WEA- THER CDDE	(	LDUD ODES		!	NDDC TATION NUMBER	
3189	502	El	3503	3 N	041	303	W	113	58	09	10	0	59	1968	Ε	16	036			40	23	03	2	6		1	3	X1		) 3			0036	
									WA	TER		W	ΝŌ	BAR	10-	AI	R TEM	P. °C		1	40. T		CIAL	7										
									COLOR	TR	m) D	IR.	SPEED OR FORC	MET	ER	DF BU		W E		DE	PTHS	OBSERV		45										
									DΤ	5	D 2	7	510	12	5	23	9	22	2 7	1	4													
	- 1	MESSENG TIME HR 1/1	CAST NO.	C.A. TY		OEPT	(H (m)	1	rc		s */.		ŞIG	MA-T			VOLUM		₹ ∆ 0 DYN. M X 10 <sup>3</sup>	.	200		02 1	nt/I	PO.	4~P 01/I		TA L-P		) <sub>2</sub> -N - ot/1	NO3-N µg - a1/l	\$1 D4~\$ µg + of/		500
										T																								T
					" סד		00		406		627		24		0	033	449		0000		153													
		05	9	ОВ			00	2	406		626		24	60							153	40												
					TD		10				627																							
				OB	S TD		10				626 627																							
		00	1	OB			20				626																							
			•		Τo		30				633																							
				OB			30				632																							
				08	S	0.0	48			3	624	0																						
					TD		50				625																							
				ОВ			150				625																							
				OB			60				633																							
					TO		75				629																							
				OB	S TD		00				628 634																							
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				08			50				632																							
					TD		00				625																							
				ОВ			00				624																							
				_	TD		50				614																							
				08			50	,	E C O		613		24	70								<b>=</b> 0												
				ОВ	5	02	71	1	559	3	609	I	26	70							151	50												

FERENCE T 10.	SHIP		TITUD		LONGITU	DE	DELFT		SDEN		TION T		YEAR	CRUIS	ORIGIN	ATOR'S TATION	-	DEPTH TO	DEPTI		WAVE SERVATIONS	5 j T)	EA-	CLOUD			NOD'S
NO.	CODE		1	/10		1/10	) <sup>2</sup> =	10"	11"	MOI	DAY	(P.1/10		NO.		UMBER		BOTTOM	S'MPL	S DD	HOT PER	EA CO	DDE -	TYPE A UT			STEAN BEG
1850	2 E1	35	01	N	04803	3 W	1	113	58	09	10	117 1	968	E16	03	7	-	1297	03	22		3 ×	1	0 3			0037
									WA	TER		WIND	BARC	-	AIR TE	up "C	1	NO.									
									COLDR	184 N 5	DIR.	SPEED OR FORCE	M ETE (mbs	R	DRY BULB	W ET BULB	CODE	OBS. DEPTHS	0.8550	VATIONS							
									DT	SD	26	508	156	5 2	39	222	7	14									
	MESSENI TIME HR 1/1	oj N	.ST O.	CARC		EPTH	(m.)		*C	5	٠.,	SIGN	1 = A	SPECIF	C VOLU	, + D	Δ D γΝ. Μ × 10 <sup>3</sup>		OCITY	D <sub>2</sub> m1/1	PO4+P			NO2=N ug - et/1	NO3=N ug - at/1	51 D4~5	
			-	sī	p (	000	0	2	408	36	26	245	9	003	356	3 0	000	15	341								
	11	7		OBS		000			408		260	245				, ,	• • •		341								
				S T	0 0	001	0			36	26																
				OBS		001					261																
				ST		002				36																	
	0.0	1		085		002					237																
				ST		003				36																	
				OBS		003					198																
				OBS		004					312																
				ST OBS		005				36																	
				085		005					287																
				5T		005				36	201																
				0BS		07					311																
				5 T		10				36																	
				0BS	-	010					343																
				ST		12				36																	
				085		12					340																
				5 T		15				36	_																
				oB S		15					312																
				ST		20				36																	
				0 <del>9</del> S		20					212																
						25				36																	
				ST	U	160	U			20	13																
				51 085		25					133																

FERENCE	SHIP			-	MAR	SDEN	STA	TION	TIME		С	RIGINA	Z°ROTA		DEPTH	DEP			WAVE			WEA-					NODS
Y ID.	CODE	LATITU		LONGITUDE	7	JAPE		(GAT		YEAR	CPUISE NO.		TA TION		TO BOTTOM	. 0	F		ERVAT			THER	000				STATION NUMBER
-			1/10	1/10	10*	1*			HR,1/10				UMBE	- 1		5 M.I	_		HGT PE		-		TYPE A			-	
18502	E1	3500	N	04800 W	113	_				1968					4206	0	3 7	25		1	3	Хl	0 3	3			0038
						WA	1	_	WIN D SPEED	BARG	)• <u> </u>	IR TEN		vis			PECTAL										
						COLOR	TRANS	019.	FORC	14.611		UL8	A ET		DEPTHS	CBSE	RVATI	2 40									
						DT	SD	31	505	15	2 24	44	225	7	12												
				1			1		1000		_			≅ ∆ D	`				1								
	MESSENGR TIME	약 NO.	CAR		1	*C	5	*/**	SIG	A A −T	SPECIFIC	AULOV : DIKHTUA		DYN M	301	UND	0.2	m1/1	PO.	01: i		A ( = P )	NO2-1		3-14	51 O4-	
	HR 1/10	+			-	_	1		-				-	x 10 <sup>3</sup>	-		+				-						
		1 1	_				١																	ĺ			
	179	,	ST			447	36		24		0034	4170	) (	000		350											
	175	9	0BS		2	447	36	247	24	40					15.	350											
			089					239																			
			51				36																				
	001	1	085																								
							36	184																			
								184 27																			
			51	D 0030			36	184 27 270																			
			51 085	D 0030			36 36	27 270																			
			51	0030 0030 0 0050			36 36 36	27																			
			51 083 51	0030 0030 0 0050 0 0050			36 36 36	27 270 24 239																			
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			51 083 51 083	0030 0030 0050 0050 0075 0075			36 36 36 36 36	27 270 24 239 31 309																			
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REFERENCE SHIP CODE	LATITE	1/10 L	ONGITUDE		SDEN JARE	(4	GMTI	ME R.1/10	YE A.R	CRUISI NO.		DR'S FLON MBÉR	OEPT TO BOTTO	DEF	H	OBSE	WAVE RVATI	ONS	WEA THER CODE	COL	ES			NODC STATION NUMBER
318502 E1	3501	N 0	4803 W	113	58	09 1	0 2	37 1	968	E16	039		274	3 03	3	29		3	X 1	0	3			0039
					WA	TER	v	/1ND	BARG	5-	AIR TEMP.	*C vis	NO.		PECIA	1								
					COLOR	TRANS.	DIR.	SPEED	METE (mbs			VET COD	DEPT	0.055										
					DT		34	506	166	_		28 7	12	+-										
		т			יט	30	34	300	100	2	37 2		٠,-		_					1	_		-	
MESSENI	GP CAST	CARD	DEPTH 6	m) I	*c	S	٠/	SIGA	AA-T		C VOLUME	∑ △ D	4 I '	LOCITY	0;	m1/I	PO4		TOTAL-			NO3-N	5104-	
HR 1/1		ITPE								ANON		x 103	v	LOCITY	_		ng.	a1/1	¥9 - 01/1	µg - 01	^ '	ug - 01/1	nā - o	1/1
		SID	0000		441	362		249		003	4475	0000	_	5348										
23	17	OBS	0000		441	362		249	0				1	348										
		SID	0010			362																		
		OBS	0010			362																		
0.0	. 7	STD OBS	0020			362 362																		
00	, 1	510	0030			361																		
		OBS	0030			361																		
		STO	0050			363																		
		OBS	0050			363																		
		STO	0079	5		363	2																	
		OBS	0079	5		363	24																	
		SID	0100	)		363	3																	
		OBS	0100			363																		
		SID				363																		
		OBS	0125			363																		
		SID	0150			363																		
		OBS STD	0150			363																		
		085	0200			362 362																		
		STO				361																		
		OBS	0250			361																		

REFERENCE  CTRY ID.  CODE NO.	SHIP	LATITU	DE 1/10	LDNGIT	UOE '1/10	DRIFT	MARS SOU	ARE	ST	ATION IG M			EAR	CRUISE NO.	S	ATOR'S TATIOI	N	1	TO TO	MAX. DEPTH OF S'MPL'S		WAY BSERVA			WEA THER	Ĺ	CODES		S	NODC TATION IUMBER
318502	F1	3500	N	0480	0 W		113	58	09	11	058	1.	968	E16	040	n		42	206	03	28	17		3	×1		0 3			0040
, , , , , , , , ,	1 42 1					, ,		WAT	_	1	WIND	1-	BARC			MP. C		۲.	NO.			٦' '	'	-				1	,	
								COLOR	TRA*		R. O	R	M ETE (mbs	R   C	)RY Jlb	WET		10	nec l	SPEC OBSERVA		5								
								DT	SI	0 3:	3 51	0	166	2:	33	206	7	1	6			1								
	MESSENGE TIME HR 1/10	약 NO.	CAR		EPTH	(m)	τ	℃		s ·4.	s	GMA	-1	SPECIFIC			₹ △ 0 0YN. A X 10 <sup>3</sup>	۷. i	\$OU		O <sub>2</sub> ml.		04-P		DTA L I g - 01/I		102-N 9 • a1/l	1°03-N v9 - ai/l	\$1 O4-\$1   04-\$1	рН
									Τ							-								Ţ						
			51		000			403		614		452		003	4264	4 (	0000	)	153											
	058	8	089		000		2	403		6143	3 2	45	2						153	38										
			\$1	-	001					618																				
			OBS		001					6183	3																			
	0.0	1	51		200					630																				
	00	1	OB 5		002 003					6303	,																			
			OBS		003					632 632:																				
			OBS		003					6263																				
			083		003					6323																				
			OBS		003					6303																				
			083		004					5353																				
			51		005					634																				
			OBS	5 1	005	0			3	6336	5																			
			51	ro (	007	5			3	635																				
			OBS	5 (	007	5			3	6352	2																			
			S 1		010					534																				
			OBS		010				3	5343	3																			
			\$1		012					536																				
			OBS		012					5363	,																			
			S1		015					535																				
			OBS		015					5353	,																			
			51	-	020					628																				
			0B3		020					6283	5																			
			083		025 025					520 6202	,																			

ID. CODE	LATITU	DE 10	ONGITUDE HEAD NOT THE PROPERTY OF THE PROPERTY	MARSDEN SOUARE	STATION (GM)	11	YEAR	CRUISE NO.	STAT	lion	7	EPTH O TO MOTTO	MAX. DEPTH OF S'MPL'S		WAV SERVA		W E TH	ER	CLOUD CODES		5	NODE TATION NUMBER
BS02 E1	3501	N 04	4803 W	113 58	09 11	117	1968	E16	041		43	316	03	01	$\top$	3		-+	0 3			0041
				WA	_	WIND	BAR	o.	IR TEMP.			ND.	SPEC	tai	]							
				COLOR	TRANS DIR	SPEE OR FOR	741211			VET CO	DE	OBS. EPTHS	OBSERVA									
				DT	50 36	-	-		-	11 7	-	8			1							
MESSENGI TIME HR 1/10	ND.	CARD	DEPTH (m)	7 °C	5 %.	SIC	SMA-T	SPECIFIC	VOLUME	₹ ∆ DYN, x 10	D <sub>M</sub>	200		0 2 ml/		4-7	101AL		NO2-N ug + 01/I	NO3-N	\$1.04-\$1 No - 01/1	
										-			-		+-			$\top$				1
'	. ,	STD	0000	2411	3615	24	50	00 34	427	000	0 '	153	40		1			- 1				1
11	7	OBS	0000	2411	36152	24	150					153	40									
		OBS	0007		36161																	
00.		STD	0010		3624																	
001	ļ.	085	0010		36241																	
		OBS	0011		36298																	
		STD OBS	0020 0020		3630																	
		085	0026		36301 36330																	
		SID	0026		3607																	
		OBS	0030		36066																	
		085	0032		36201																	
		STD	0050		3632																	
		OBS	0050		36323																	
		OBS	0066		36344																	
		OBS	0070		36281																	
		STD	0075		3631																	
		OBS	0075		36311																	
		SID	0100		3633																	
		OBS	0100		36334																	
		SID	0125		3635																	
		OBS	0125		36351																	
		STO	0150		3635																	
		OBS	0150		36351																	
		STD	0200		3630																	
		OBS	0200		36296																	
		STD	0250		3623																	
		085 085	0250 02 <b>7</b> 0		36229 36200																	

TRY ID.	SHIP	LATITU	DE LO	NGITUDE NOCIA	MARSDEN SOUARE	STATION T	YE A R		TION	DEPTH DEF	TH DBS	WAVE SERVATIONS HGT FER SE	WEA- THER CODE	CODES		2.1	IODC ATION JMBER
31850	2 E1	3503	N 04	800 W				E16 042		4206 0	3 36	1	3 X1	0 3		0	042
					_	TRANS. DIR	SPEED MET	ER DRY	WET CODE	NO. OBS. DEPTHS DBSI	PECIAL RVATIONS						
					DT	SD 35	522 17		217 7	18							
	MESSENGR TIME HR 1/10	or NO.	C APD TYPE	DEPTH (m)	1 %	s */	SIGMA-T	SPECIFIC VOLUMI	₹ △ D DYN, M x 10 <sup>3</sup>	SOUND	02 ml/l	PO4-P µg + m1/1	TOTAL-P		NO3-N ug - 01/I	\$1.04~\$1 µg = 01/1	рН
		ļ	STD	0000	2422	3612	2444	0034999	0000	15342	ĺ						
	178	3	OBS	0000	2422	36116	2444	00 34777	0000	15342							
			STD	0010		3612											
			OBS	0010		36116											
	0.00		STO	0020		3614											
	002	2	OBS STD	0020		36141 3632											
			085	0030		36321											
			085	0042		36641											
			STD	0050		3660											
			085	0050		36602											
			OBS	0062		36371											
			SID	0075		3645											
			085	0075		36451											
			OBS	0085		36360											
			OBS	0090		36487											
			OBS OBS	00 <b>94</b> 00 <b>96</b>		36391 36503											
			STD	0100		3647											
			OBS	0100		36470											
			SID	0125		3647											
			085	0125		36471											
			STD	0150		3647											
			OBS	0150		36471											
			STD	0200		3636											
			085	0200		36356											
			ST0	0250	1652	3626	2661	0015175	0627								
				0250 0250 0264	1652 1652	3626 36259 36221	2661 2661	0015175	0627	15177 15177							

REFEREN	Œ	SHIP			T		MAR	SDEN	STA	ION I	IME			ORIGIT	NATO	R*S	T	DEPTH	MAX. DEPTH		WAV			WEA-	CLO			Т	NODC
CTRY IS		CODE	LATITU		LON	GITUDE S	102	ARE		IGMT)		YEAR	CRUI		STATE	ON RFR	٦,	TO BOTTOM	OF S'MPL'S	DIR	SERVAT			CODE	TIPE			ı	STATION NUMBER
	-			1/10	-	17 10	10				1R.1/10		+	+			+.		1	<b>†</b>	HGTF	_		<u>.</u> ,		_		-+	0040
3185	0 2	EI	3500	N	041	801 W	1113	58 WAT			238	1968	EI	6 04		~ T	-14	1023	03	36	1 1	1	3	X1	0 1:	• 1		1	0043
								COLOR		+	SPEEC	BAR		DRY	T w	—— v	ZIV BGC	NO.	SPEC	JAL									
								CODE	(m)	DIR.	FORC	1 4 4		BULB	BU			DEPTHS	OBSERT	- 110143									
								DT	SD	35	515	18	3 .	233	22	22 7		12			1								
		MESSENG TIME HR 1/1	CAST NO.		ARD TPE	DEPTH (m)	1	°c	5	٠/	SIG	MA-T		FIC VOL		₹ ∆ DYN.	M.		OCITY	O2 ml/		4-P		DTAL-P	NO2~		)3=N - 01/I	S1 O4- 0 - وبر	
		77.	•	_					_		1		<b>†</b>				_	-					1			$\top$			-
		l	1	S	TD	0000	່ 2	412	36	15	24	50	00	3444	8 '	000	0	153	340		'		1	,		'	'		'
		23	8	ОВ	S	0000		412	36	153	24	50						153	340										
					TD	0010			36																				
				08		0010				158																			
		00	,	- S - 08	TD	0020 0020			36	16 163																			
		00	1		TD	0030			36																				
				08		0030				253																			
				S	TD	0050			36	23																			
				08		0050				233																			
					TD	0075			36																				
				08		0075				328																			
				- S - OB	TD	0100 0100			36	38 378																			
					TD	0125			36																				
				08		0125				378																			
					TD	0150			36																				
				08	15	0150			36	393																			
					TD	0200			36																				
				08		0200				318																			
					TD	0250			36																				
				08		0250				223																			
				OB	5	0270			36	193																			

CODE NO.	SHIP	LATITUO	)E 1/10	LONGITUDE 1/10		1	STATION IGN	tT1	YEAR	10	ORIG RUISE NO.	OTANI TATZ MUN	ION	$\neg$	DEPTH TO TOM	MAX. DEPTH OF S'MPL"	1	SERVA	TIONS	THE COC	COD	2		NODC STATION NUMBER	
318502	E1	3500	N (	04800 W	113			058	196	8 8	_	44		4	206	03	36		4	X1	0 3			0044	
						WA	_	WIND		A RO-		TEMP.		2IV	NO. OBS.	SPE	CIAL								
						COLOR	TRANS. D	IR O	1 LT	ETER mbs1	DRY		ET C	001	OBS. DEPTHS	O858RV	A TION S								
						DT	SD 0			66	228	12	11	-+	16										
ſ					1	10,	100	-   0 -	-   -									Ц		-	1		T	7	
1	MESSENGE TIME	L CAST	CARD	DEPTH (m	1 T	℃	2 */*	- 51	GMA-T	r   S,	PECIFIC VO ANOMALY-	LUME -IIO'	อังทั	2 M.		DCITY	02 m1/		4-P	IDTAL-			\$1 O4-3		ģ
	HR 1/10			-			1			+			×	103	-	-					1 20 0 11	pg - 601		-	-47
J					1 _					١.								1				1	1	1	- [ ]
	058		STE	0000		398	3608		449	C	00345	48	000	00	153										
	056		085 ST		2	398	3608 3609		449						153	336									
			085	0010			3608																		
	001		OBS	0016			3608																		
			STE				3621																		
			085	0020			3620																		
			OBS	0025			3618	4																	
			STO				3629																		
			085	0030			3628																		
			085	0032			3616																		
			OBS	0040			3648																		
			STO OBS	0050 0050			3649 3648																		
			ST				3649																		
			085	0075			3648																		
			STO				3650																		
			085	0100			3650																		
			ST				3650																		
			OBS	0125			3650	4																	
			ST				3648																		
			OBS	0150			3648	3																	
			STE	_			3641																		
			08 S	0200 0250			3641 3631	4																	
			085	0250			3630	6																	
			OBS	0270			3624																		

TRY	ID. NO.	SHIP	LATITU	JDE 1/10	LONGITUDE E	SOU	DEN APE		ION I		YEAR	CRUISE NO.		TOR'S ATION J M 8ER		DEPTH TO BOTTON	DEPTH OF S'MPL'S	085	WAVE ERVATI	IONS	WEA THER CODE	CLOUD CODES		- 5	NOTIC TATION LUMBIR
318	3502	E1	3501	N	04803 W	113	58	09	12	178	1968	E16	045			4389	03	03		4		1			0045
						. [	WA		-	WIND	BAP	*	AIR TEAM			NO.	T			_	^1	, 0 . ,	1		004)
							COLOR	TRANS	DIR	SPEED	A4 ET	P	ULB	WET	2006	CBS	OBSERV								
						,	DŤ	SD	04	512	19			222	7	16	-								
		MESSENO TIME HR 1/1	NO.	C AR TYP		T	°C	S	14.	SIG	M A = T	SPEC FIC ANOM	VOLUM ALY-X10	. ] [	x 103		UND	O 2 m1/1	PO .		fOTAL-P	NO2=N pg - 01, I	NO3-N	\$1.04=\$1 µg = a1/1	рН
				- 1																					1
		, ,	•	51			401	36		24		003	4496	0	000		337								
		17	8	0BS		24	401		103	24	49					15	337								
				083				36	103																
				51				36																	
		00	1	085					118																
			-	085					70																
				085					219																
				085					117																
				085	0028			36	327																
				51	0 0030			36	33																
				089	0030			36	327																
				51				365	50																
				OB 5				365																	
				S T				364																	
				085				364																	
				51				365																	
				08.5				365																	
				51				365																	
				OBS				365																	
				51				364																	
				085				364																	
				51				364																	
				085				364																	
				51				363																	
				085				363																	
				085	0270			362	46																

ID. NO.	SHIP	LATITU	J DE 1/10	LON	GITUGE	INOCTA #TOCTA	MARS SOU			TION TI IGMTI		YEA	CK	UISE 10.		TOR'S ATION JMBER		OEPTH TO BOTTO	DEPIR	1 08	WAV SERVA			HER ODE	CLOU CODE	S		NODC STATION NUMBE	IN
502	El	3500	) N	041	803 W		113	58	09	12 2	37	196	8 E	16	046		- 4	4206	03	04		3	,   x	1	0 3		İ	004	6
							[		TER		IND		ARO-		IR TEM	P. °C	VIS	NO.		CIAL	]								
								COLOR		DIR.	SPEE	D 1	ETER		RY ILB	WET	CODE	OBS.	Dece es	A TIONS									
								CODE	+	+	FOR	-1	mbs1	-	-		-		-		-								
								DT	SD	04	510	) 1	93	23	33	217	7	13	Ь,		L,						_		_
	MESSENG	CAST		ARD	OEPTH I	m I	1	*c	,	•/	510	5 M A -			VOLUM		△ 0 N. M.		DND	02 m1/		14-P	TOTA		NO2-N				н
	HR 1/10	T NO.	T	r PE	Otrini (	,,			1	•••	310	,,,,,,	A	NOM,	k[7-X10		x 10 <sup>3</sup>	VEL	OCITY		hB.	+ 01,11	¥9 -	01/1	µg + 01/	μg = a1.	() h8 - p	1/1	
		1	5	то	0000	)	2:	396	36	12	24	52	0.0	034	210	0.0	000	15	336		,								
	23	7	08	S	0000	)	2:	396	36	123	24	52						15	336										
			s	TD	0010	)			36																				
			08		0010					128																			
				TO	0020				36																				
	00	1	ОВ		0020					143																			
				TD	0030				36																				
			OB		0030					405																			
			OB		0042					304																			
				TD	0050				36																				
			OB	To	0050				36	506																			
			08		007					526																			
				10	0100				36																				
			08		0100					505																			
				TO	012				36																				
			08		0125					486																			
				TD	0150				36	49																			
			08		0150				36	485																			
				TO	0200	0			36	35																			
			OB	5	0200	)			36	345																			
			5	TD	0250	0			36	22																			
			08		025				36	215																			
			08	5	026	2			36	169																			

CTAY ID.	CODE	LA TITUI	DE 1 10	LONGITUDE	DRIFT	MARS SOU	ARE		TION T	IME 18,1/10	YEAR	CRUISE NO.		ATOR*	N	DEF	0	MAX. DEPTH OF S'MPL*S	OB	WAV SERVAT		T)	EA- HER DDE -	CODE	2	STA	DOC TION MBER
318502	E1	3502	-	04801 W		113	58			057		F16	04	7		452	26	03	05				6	0 3		0	047
310302		1 3 3 0 2	13	04001 #	, ,	117	WA		-	MINO	BAR		AIR TE			NO	-7	-		ו' '	1 -	, , ^	0 1	0 / 5	,	1 0	U <del>-</del> 1 1
							COLOR	TRANS	DIR.	SPEE OR FDRO	MET	ER	DRY ULS	W E BUL			85.	OBSERV.									
							DT	Sn	0.5	516	+	3 2	17	20	6 7	12	2										
	MESSENG TIME HR 1/1	of NO.	C.A.		(m1	T	τ.	5	٠/	\$10	MA-T		VOLU		₹ ∆ D DYN. A X 10 <sup>3</sup>	٠. ١.,	SOU VELO		O 2 ml/		4-P	TOTA:		NO2-N µg - 01/		- 01/1	рН
				TD 000	n	2.	399	36	16	24	54	003	409	2	0000		153	27									
	0.5	7	0B				399		151		54	003	409.	5	,,,,,,	_	153										
				TD 001		-		36		-						•											
			ОВ						151																		
			5	TD 002	0			36	27																		
	00	1	ОВ						271																		
				TD 003				36																			
			OB.						251																		
			0B	TD 005 S 005				36	32 320																		
				TD 007				36																			
			ОВ						338																		
				TD 010				36																			
			ОВ	s 010	0				366																		
			S	TD 012	5			36	37																		
			OB					36	371																		
				TD 015					37																		
			ОВ						366																		
				TD 020				36																			
			ОВ						321																		
				TD 025				36																			
			OB OB						178 161																		

CTEY CODE	ID. NO.	SHIP	LATITU	OE 1/10	LONGITUDE 12/10	MAR SQU	ARE	31 M.O	ATION IGM	T)		YEA	R	CRUISI NO.		NATO STAT	ION			EPTH TO TTOM	DE	PTH OF APL*S		Q85		TION!		WEA THER COD	. 🗀	CODES		5	NODC TATION IUMBER	
31	3502	E1	3500	N	04802 W	113	58	09	13	+-	_	196	8	E16	04	8			44	78	0	3	0	5			3	×1	1	0 3			0048	
, , , ,							WA		1		ND	_	ARO	_	_	EMP.	*C	$T^{\perp}$	Τ.	NO.	μ.		_	$\overline{}$	, ,	ı					,	1		j
							COLOR	TRA	IIG 2M	R.	SPEED OF FORCE	) N	ETEI (mbs)	1	ORY BULB		/ ET J L B	CODI	J	200		SPEC		N S										
							DT	5	D 0	2 !	512	_	93	2	44	2	17	7	1	3				_										
		MESSENG TIME HR 1/10	g NO.	C AR TYP		г	10		5 %		ŞIG	MA-	T	SPECIFI			ום	∆ 0 M, M x 10 <sup>3</sup>		\$OU VELO	סמוני		02	ml/I		) 4 P 01/I		) TA L=1		0 <sub>2</sub> -N g - at l	NO3-N µg - at/1	51 O 4 51		
				١.,			•••				١		İ																			1		
		11		51			392 392		611 610	,		52 52		003	422	20	00	000		153 153														
		11	•	08 S		2	372		611	0	24	52								133	2 2 2	•												
				085					610	6																								
				51					612	•																								
		00	1	08.9					612	1																								
				085	0026			3	638	8																								
				5 T	D 0030			3	629																									
				083				3	6286	6																								
				ST					622																									
				0B S					621																									
				S T					639																									
				OBS					638	7																								
				51					647																									
				0B 5					647: 648	1																								
				085				_	048 648	٨.																								
				ST					647	•																								
				085				-	646(	6																								
				ST					631	~																								
				085					630	9																								
				ST					615																									
				08.9	0250			3	614	5																								
				085	0270			3	615	3																								

ERENCE IO.	SHIP	LATITI	JDE 1/10	LONG		DRIFT		SDEN JARE	STAT	ION TI		YEAR	CPUIS	1	STATIO NUMB	DN -	DEPT TO EDITO	OFFIR		WAVE SERVATK		WEA- THER CODE	COURS			NGOC STATION NUMBER	
+	, ,	2500		04.8	00 W	+		+				0.0	E1.	0.	0		4.30	-	1		3	v 1	0 3			0049	7
1850	2 61	3500	) N	048	00 W		113	WA	091	_	VIND	968	-	6 04		-	420	7	0.5	1	. 3	×Ι	0 3			0045	,
								COLOR	*BANS	DIR.	SPEED OF FORCE	N ETI (mbi	E P s I	BUL8 DRY	W E	t co	DEPT	Cacco	CIAL 'ATIONS								
								DT	SD	03	506	17	6	267	22	8 7	13								,		
	MESSENG TIME HR 1/10		C.A.		DEPTH	[ <b>m</b> )	,	- 5	5	٠	SIGN	A-T		FIC VOL		₹ ∆ DYN. x 10	M	OUND E.GC T	02 =	PO.			N ⊃2=N N ⊃2=N	1403-14 49 - 01	51 C 4-		_
			_		000				1		344	-	-					5047									
		_		T D	000			439	36		244		0.0	3490	1 (	000		5347									
	17	7	OB		000		2	439		197	244	5					1	5347									
			0B	TD	001				36	19 187																	
				In .	002				36																		
	00	,	08		002					192																	
	00	-	OB		002					377																	
				TD	003				36																		
			ов		003					272																	
			S	TD	005	0			36	27																	
			ОВ	S	005	0			36	274																	
			S	TD	007	5			36	31																	
			OB	5	007	5			36	312																	
			S	TD	010	0			36	29																	
			0B	S	010	0			36	292																	
				TD.	012				36																		
			OВ		012					312																	
				TD	015				36																		
			ов		015					302																	
				TD	020				36																		
			ОВ		020					210																	
				TD	025				36																		
			ов	S	025		1			102 083	26							5146									

1BS02 1	ODE	LATITU	DE LO	NGITUDE 🍃	MARS SQU	ARE		ON TIM		YEAR	CRUISE NO.		TOP'S ATION UMBER	4	DEPTH TO BOTTO	UEPI	<b>+</b> c	BSERVA		0	EP C	ODES	)		NODC STATION STATION PURPER
	El	3500	N 04	802 W	113	58	09 1	3 23	7 1	968	E16	050	1		4389	03	04	<u>.</u>	1:	3 X	1 0	3			0050
					Į	WAT		WI		BARO	)- <del> </del>	IR TEM		VIS	NO.	SP	ECIAL								
						COLOR	TRANS.	OIR.	SPEED OR FORCE	M ETE (mbs		JLB	W ET BULB	CODE	OBS. DEPTH	S 085E#	VATION	is .							
					Ì	DT	SD	-	04	190		33	211	_	14	+		-							
		1			_			77		1-7				_	-				_						
- 1	ESSENGE TIME R 1/10	NO.	TYPE	DEPTH (m)	T	٣	S	٠/٠.	SIGM	A-1	ANDM	VOLUA ALT-E10	, E	₹ △ D 54N. M x 10 <sup>3</sup>	. VE	LOCITY	02 =		)4=P - 01::	TOTAL.		2=N 01: I		51 O4-5	2 **
			STD	0000	24	•23	361	5	244	۲	003	4818		000	16	343		í				į			
	237	7	OBS	0000		+23	361		244	-	000	.010				343									
	~		STD	0010	-		361		-	•					• •										
			OBS	0010			361																		
			STD	0020			361	6																	
	001	l	085	0020			361	63																	
			OBS	0024			361	63																	
			OBS	0029			363	38																	
			STD	0030			363	3																	
			OBS	0030			363																		
			STD	0050			362																		
			OBS	0050			362																		
			STD	0075			363																		
			OBS	0075			363																		
			STD	0100			363																		
			085	0100			363																		
			STD	0125			363																		
			085	0125			363																		
			STD	0150			363																		
			OBS	0150			363																		
			SID	0200			362																		
			OBS	0200			362																		
			STD	0250			361																		
			OBS OBS	0250 0270			361 360																		

IY ID.	CODE	LATITU	DE 1/10	LONGITUDE	DRIFT	MARSDE SDUARI	N I*	STA	TION IGMT	TIME HR, 1/10	YEAR	CRUI	36	STATIO NUMB	N	DEPT TO BDTTC	DEPTE	1 08	WAVI SERVAT	TIONS	Ţ	VEA- HER ODE	C	OUD			NODC TATION NUMBER
1850	2 E1	3500	N	04800 W		113 5	8	09	14	058	1968	Εı	6 05	1		420	6 03	04			3 ;	Κ1	0	3			0051
		-					WA	T E R		WIND	BAR			M₽, °C	VI	NO.		CIAL	]								
							LOR	TRAN	S. DIR.		The Co		DRY BULB	W E	co			VATIONS									
						-		50	2.7	505	17	-	222	20		12	+		-								
		_				D	1	50	27	200	17	7		20	0 /	12			-					_			
	MESSENG	CAST	CAR		m)	T 10			٠/	SIG	MA-T		FIC VOL		₹ A DYN.	w.  :	OUND	D <sub>2</sub> ml/		4-1	TOTA			2-N	NO3-N	SI 04-5	
	HR 1/10		TYP	E .						_			mali-		x 10 <sup>2</sup>	' Y	ELOCITY		h8.	- 01/1	nā.	01/1	νg -	01/1	μg - αt/1	µg - a1/	
										1						-											
	,		51			241			14	24		00	3451	. 3	0000	_	5340										
	05	8	OBS			241	0		136	24	49					1	5340										
			S1 0B5						29 286																		
			\$1						28																		
	00	1	OBS	_					276																		
		•	51						30																		
			08.9	003	)			36	301																		
			S1	-					30																		
			08.9						296																		
			\$1						33																		
			0BS						331 48																		
			089						475																		
			51	_					47																		
			OBS						466	,																	
			\$1	D 015	0			36	43																		
			085						426																		
			51						30																		
			OB S						301																		
			51						15 146																		
			083	0.25	,																						

CTRY ID.	SHIP	LATITU	1/10	ONGITUDE PO	MAR! SQU		t	ON TIA		YEAR	CRUISE NO.		OR'S TION MBER		DEPTH TO BOTTOM	MAX, DEPTH OF S'MPL'S		WAY DBSERVA	TION		WEA- THER CODE	CLOU COD	5	 \$3.4	DOC TION MBER
31850	2 E1	3501	N O	4802 W	113	58			-	968	E16	052			4334	03	05			2	X1	0 3		 0	052
, -	-,			- '		WA			IND	BARC		IR TEMP	. °C		NO.			ר' 'ר	'	- 1				, -	
						COLOR	TRANS.	DIR.	SPEED OF FORCE	METE	R		W ET	VIS. CODE	200	OBSERV		s							
						DT	SD	14	507	193	3 2	44	228	7	13			7							
	MESSENG TIME HR 1/1		CARD TYPE	DEPTH (m)	٢	*c	s	٠/٠.	SIGN	A-T		VOLUMI ALY-X10 <sup>7</sup>	DYN	∆ D 4. M	SOL	IND	02 m		04-P - 01/		0 TAL = P	NO2+1		4-St - ot/1	рН
			STD	0000		412	361		245		003	4253	0.0	00	153										
	11	8	OBS	0000	2	412	361		245	2					153	341									
			STD				361																		
			OBS	0010			361																		
	0.0		STD	0020			361																		
	00	1	OBS OBS	0020			361																		
			STO	0025			363																		
							363																		
			OBS STD	0030 0050			363	_																	
			OBS	0050			363																		
			STD				363 363																		
			085	0075			363																		
			STO				363																		
			OBS	0100			363																		
			STD				363																		
			OBS	0125			363																		
			STD				363																		
			OBS	0150			363																		
			510				362																		
			OBS	0200			362																		
			STD				361																		
			OBS	0250			361																		
			OBS	0269			360	81																	

CTRY ID.	SHIP	LATITU	DE LO	GITUDE 1208	MARS SQU	ARE	ti	ON TI		YEAR	CRUISE NO.		OR'S ATION ATBER		DEPTH TO BOTTOM	DEPT OF S'MPL	0	WAV BSERVA	TIONS	TH CO	EP	CCCF	\$		NODC STATION NUMBER
31850	2 E 1	3500	N 04	800 W	113					1968		053		4	4334	03	23		2	2 X	1	0 3	-		0053
						WA	_		SPEED	BAR	V-	AIR TEM		VIS	NO.	SP	ECIAL								
						COLOR	TRANS.	DIR.	FORCE	A* ET		DRY	W ET BULB	rond	OBS. DEPTHS	OBSER	VA TION	S							
						DT	SD	22	510	19	3 2	61	217	7	12			1							
	MESSENG TIME HR 1/11	NO.	CARD TYPE	DEPTH (m)	1	٦	s	٠	SIGA	AA-T		C VOLUM	AYO	△ D. N. M. 10 <sup>3</sup>		JNO DCITY	02 m		14=P - 01/1	TOTAL		1402-N ug = 61/		\$104-5 ug - al	
																		1							
	17	~	STD OBS	0000		432	362		244		003	4535	0.0	00	151										
	1 /	′	SID	0010	2	432	362 362		244	• 9					15	346									
			OBS	0010			362																		
			STD	0020			363																		
	0.0	1	OBS	0020			363																		
	00	1	OBS SID	0020			363 363	84																	
	00	1						84 3																	
	00	1	STD OBS STD	0030 0030 0050			363	84 3 27																	
	00	1	STD OBS STD OBS	0030 0030 0050 0050			363 363 363	84 3 27 2 24																	
	00	1	STD OBS STD OBS STD	0030 0030 0050 0050 0075			363 363 363 363 363	84 3 27 2 24 2																	
	00	1	STD OBS STD OBS STD OBS	0030 0030 0050 0050 0075 0075			363 363 363 363 363	84 3 27 2 24 2 19																	
	00	1	STD OBS STD OBS STD OBS STD	0030 0030 0050 0050 0075 0075			363 363 363 363 363 363	84 3 27 2 24 2 19 3																	
	00	1	STD OBS STD OBS STD OBS STD OBS	0030 0030 0050 0050 0075 0075 0100 0100			363 363 363 363 363 363 363	84 3 27 2 24 2 19 3																	
	00	1	STD OBS STD OBS STD OBS STD OBS STD	0030 0030 0050 0050 0075 0075 0100 0100 0125			363 363 363 363 363 363 363 363	84 27 2 24 2 19 3 29																	
	00	1	STD OBS STD OBS STD OBS STD OBS STD OBS	0030 0030 0050 0050 0075 0075 0100 0100 0125 0125			363 363 363 363 363 363 363 363 363	84 27 2 24 2 19 3 29 4 38																	
	00	1	STD OBS STD OBS STD OBS STD OBS STD	0030 0030 0050 0050 0075 0075 0100 0100 0125 0125			363 363 363 363 363 363 363 363 363	84 3 27 2 24 2 19 3 29 4 38 2																	
	00	1	STD OBS STD OBS STD OBS STD OBS STD OBS	0030 0030 0050 0050 0075 0100 0100 0125 0125 0150			363 363 363 363 363 363 363 363 363 363	84 27 24 29 3 29 4 38 219																	
	00	1	STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0030 0030 0050 0050 0075 0100 0100 0125 0125 0150 0200			363 363 363 363 363 363 363 363 363 363	84 3 27 2 24 2 19 3 29 4 38 2 19 4																	
	00	1	STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0030 0030 0050 0050 0075 0075 0100 0100 0125 0125 0150 0150 0200			363 363 363 363 363 363 363 363 363 363	84 3 27 2 24 2 19 3 29 4 38 2 19 4 40																	
	00	1	STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0030 0030 0050 0050 0075 0100 0100 0125 0125 0150 0200			363 363 363 363 363 363 363 363 363 363	84 3 27 2 24 2 19 3 29 4 38 2 19 40 4																	

_	ENCE	SHIP	LATITU	n.	LONGITUDE	DRIFT	MAR SQU		STA	TION	TIME	YEAR		_	GINATO		_	DEPTH TO	MAX.		WAVE		WEA		ODES			NODC
CODE	ID.	CODE		1/10	1/10	, × 9	10*		MO.		HR,1/10	16.77		UISE NO.	STAT			BOTTOM	S'MPL"		HGT PE		-1 000	- !	t Av			UMBER
31	8502	F1	3501	N	04802 W		113	1	09		238	1968	F	16 0	)54			4297	03	1	$\Box$	2		1	3	1		0054
	0002		,,,,,,		0.002 #			WA		Ť	WIND	1	10.		TEMP	°C		NO.		CIAL							, ,	3034
								COLOR	TRAN		R. OII	D ME	TER	DRY		V E T U L B	CODE	Der		/A TIONS								
								DT	SE	22	2 510	20	0	244	, 2	22	7	13										
		MESSENG TIME HR 1/10	or NO.	C A		(m)	т	τ		s •/.	. S10	SMA-T		HOMALI		DY	△ D N. M. 10 <sup>3</sup>		JND OCITY	02 m1/1	PO.		101AL- pg - pt/1		1 <sub>2</sub> =N - ot/I	NO3-N ug - 01/1	SI O4-Si ug - a1/I	
					TD 000	0	3	419	1	23		•53		0 34 1	16	000	00	153	16.3					1				
		23	я	OB:				419		22		•53	0	0 34 1	14	1)0	000		343									
			•		TD 001			-1,		23								• • •	, , ,									
				OB:						22	7																	
				5	TD 002	0			36	23																		
		0.0	1	083	s 002	0			36	221	9																	
				S.	TD 003	0			36	38																		
				OB:						38																		
				OB:						29	1																	
					TD 005					29																		
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				OB.						28	2																	
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				OB.						30.	2																	
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				OB.						331	8																	
				_	TD 015					34	_																	
				OB.						34.	2																	
					TD 020					24																		
				08						24	J																	
					TD 025					13																		
				OB.						12																		
				08	S 027	0			36	06	7																	

CTRY ID.	SHIP	LATITU	DE 1/10	LON	GITUDE	10 5	sou	SDEN		TION	)	TE AR	CRUI	S E	STATI MUN	ON	-[	DEPTH TO BOTTOM	DEPT OI S*MP	[H]		WAV	TIONS		WEA- THER CODE	COOR	s		NODC STATION NUMBER
318502	51	3502		04.1	301	-	113	1	-		HR,1/10	1046				BC N	+	1389	0:	_	24	HGT		-		0 3	<del></del>		0055
310302	( CI	3502	in i	046	501	•	1113	WAT	$\overline{}$	15	WIND				EMP.	c T	1	NO.				!!	١.	2	X 1	0 13	1	1	0055
								COLOR	TRAN	S. DIR	SPEED	1771	TER	DRY BULS	W	ET CO	IS. DDE	OBS. DEPTHS	O85E	PEC IA									
								DT	50	20	S15	19		244	22			14											
	MESSENG TIME HR 1/10	º NO.	CAI		DEPT	1 (m)	Т	°C		•4.	SIG	MA-T		FIC VO		≨ ∆ DYN. x 10	D.N.	SOL VELO	DCITY	0	2 ml/l		14-P - 01/I			NO2-N µg - 01/l			
						20					7		1				_	1											
	0.5			TD '	00			411	36		24		00	342	18	000	0	153											
	059	9	OB	S TD	00		2	411		181 19	24	52						153	34 U										
			OB:		00					19 185																			
				TD.	00					19																			
	00	1	OB:		00.					185																			
	00	1	08		00					185																			
			08		00					389																			
				TD	00					30																			
			OB:		00					304																			
				TD	00					29																			
			OB:	s	00	50			36	294																			
			S	TD	00	75			36	48																			
			0B:	S	00	75			36	483																			
			S	TD	01	0.0			36	49																			
			0B	5	010	0			36	489																			
			S	TD	01	25			36	47																			
			OB:	S	01	25			36	472																			
				T D	01				36	44																			
			083	S	01				36	443																			
				<b>T</b> D	02					33																			
			OB		02					329																			
			_	TD	02					18																			
			OB:		0.2					181																			
			OBS	5	02	70			36	154																			

CTRY CODE	ID.	SHIP	LATITU		LON	IGITUDE	DRIFT		ARE		STATIO:	AT)		YEAR	CRUI	SE	STATION	)N	7	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	1	WAY	TION	- 1	WEA- THER CODE	cc	2300			NODC STATION NUMBER
	3502	Εl	3500	1/10 N	041	800 W	+-	113	58	0.9		Y HR		1968	+				+	389	03	20	NGT	PER S	3	x 1	O	3			0056
									WA	TER	Ť	W	NO.	BAR	<u>.</u> T	AIR 1	EMP. T	-	ή	NO.			ו' ו	,							
									COLOR		ANS 0	IIR.	SPEED	MET	ER	ORY BULB	W E BUL	T CC	21 300	OBS. DEPTHS	SPEC OBSERV										
									DT	15	5D 2	1	507	20	7	250	23	9 7		12			1								
		MESSENG TIME HR 1/10	Y NO.	C A TY		DEPTH	(m)	Т	°c	Ì	s •/.		SIG	MA-T		FIC VO	LUME -X10 <sup>2</sup>	₹ ∆ DYN, x 10	М. 3	SOF		02 ml/		04-P - 01/I			NO <sub>2</sub>		NO3-N yg - ol/l	\$1 O4=	
										Т																		П			
				S	TD '	000	0	2	416	3	3626		24	57	00	337	69	000	0	153	342		•								
		11	8	08		000		2	416		3626		24	57						153	342										
					TD	001					3626																				
				OB:		001					3626																				
				_	T D	002				3	3636																				
		00	1	OB.		002					3636																				
					TO	003					3632																				
				ов:		003					3632																				
					TD	005					3630																				
				08		005					1629																				
					TO	007					3629																				
				OB:		007					628																				
					TD	010					1631																				
				OB:		010					630																				
					סז	012					635																				
				OB:		012					1635																				
					TD	015					3633																				
				OB:		015					632																				
					10	020					3624																				
				OB:		020					3624																				
					TD	025					608																				
				08:		025					607																				
				OB:	5	027	U			- 3	3606	3																			

FERENCE	SHIP						_ =	MAPS			TION				ORIGIN	ATOR	,2	ĭ	DEPTH.	N.A		-	WA		W	EA-	CLOUD				Non	С.
IT ID.	coo	. ! .	•	1/10	LONG	17/16 17/16	DRIFT INDCT	5 <b>0</b> U			DAY	HR.1/10	YEAR	CRUI		STATIO			TO NOTTOM	DEP	F	DIR.		PER 3	TI	HER DDE	CODE!				TATE	OΝ
1850	2 E1	3	501	N	048	03 W		113		-			1968	F 1	5 05	7		4	206	0	-	27		_	3 X	1	0 3			-	005	5.7
	_,	, -			-		. ,		WAT			WIND	BAR	1	AIR TE			Ť	NO.				η' '									
									COLOR	1RAN5	DIR	SPEEC	MET	R	DRY	W E	T C		OBS.	OBSE	PECIA RVAT											
									CODE	1771	+-	FORC	_	-	BULB	BUI																
									DT	SD	23	512	20	)	244	23	9	7	15													
	MESSEI	NGR C	CAST	CAR		DEPTH	lm 1	1	*c	5	٠	SIG	M A-T		FIC VOLU		₹ A	D	sou		1	2 ml	P	D4-P	TOTA	L = P	NO2-N	NO	3-N	SI-O 4-	.	рн
	HR 1.	/10 T	NO.	TYP	E							1.0		ANC	MALT-X	107	X	03	VELC	CITY		2 1111	×g	- 01,1		1546	μg = at/ l	h8 -	at/l-	yg - 61.	1	pr.
				S 1		000			39	36		24		00	3437	5	000	0	153													
	2	38		OBS		000		24	139		270	24	51						153	348												
				SI		001				36																						
				OBS		001					269																					
	Ü	03		OBS		001					270																					
				SI		002				36	_																					
				OBS		002					404																					
				51		003				36																						
				OBS		003					320																					
				OBS		003					187																					
				0BS		004					330																					
				085		005				36	325 325																					
				SI		007				36																						
				OBS		007					325																					
				51		010	-			36																						
				089		010					360																					
				51		012				36																						
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				AB 9	2	012																										
				085		012																										
				51	۵٦	015	0			3 <b>6</b>	36																					
				S1 0B3	a a S	015 015	0			36 36	36 357																					
				51 0B3 51	TD S TD	015 015 020	0 0 0			36 36 36	36 357 27																					
				S1 OBS S1 OBS	0 5 1 5 5	015 015 020 020	0 0 0			36 36 36 36	36 357 27 270																					
				51 0B3 51	01 5 01 6 01 01	015 015 020	0 0 0 0			36 36 36 36 36	36 357 27 270																					

REFERENC	F					-	MAR	OEN	57.4	TION	TIME				DRIGIN.	A TOR	5	-	OEPTH	MAX		WAV	/ F	Т	WEA-	CLOU			NODC	
CTRY 10		SHIP	LATITU	DE .		DOC 1	200		314	IGMT	) .	YE	A.R	CRUISE	5	TATIC	N	١,	10	OEPTH	1 ~	BSERVA	TIONS		THER	CODE	S		STATIO	N .
CODE NO	٠. ١	.000	•	1/10	17.10	Z Z	10"	1.	MO	DAY	HR.1/10	1		NO.	_ N	UMB	ER	1	воттом	S'MPL'	S DIR	H G T	PER 5	E A	CODE	TYPE A	/T	-	140 4.86	1
31850	02	E1	3500	N	04800 W		113	58	09	16	058	19	68	E16	058	3		4	261	03	25		.	2	X 1	0 3	1		005	8
								WA	TER		WIND		BARO		A IR TEA	лР. ℃		/IS.	NO.	SPE	CIAL									
								COLOR	TRAN	S OIR	SPEE OF FOR	·   '	METE {mbs		UL8 UL8	W E	1 00	200	OBS. DEPTHS	OBSERV		5								
								DT	SD	26	506	5	207	2	39	23	3 7		12											
	- 1	ESSENGE TIME IR 1/10		CA TY		(m.)	7	*c		s •4.	Sit	GMA-	-1		VO(U		≨ ∆ 0YN. x 10	M		DOITY	0 2 ml		04-P - 01/I		TAL-P	NO3-P	NO3-1			н
						_							- 1						1,57			ĺ						1		
					TD 000			433		34		458		003	3694	4	000	U	153 153											
		058	3	08	S 000 TD 001		2	433		341 35	24	458							15:	241										
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					TD 002					38																				
		003	1	ов						376																				
			•		TD 003					31																				
				OB		0				306																				
				S	TD 005	0			36	32																				
				οв	5 005	0			36	321																				
				S	TD 007	5			36	32																				
				οв						322																				
					TD 010					34																				
				ОВ						335																				
					TD 012					34																				
				ОВ						341																				
				_	TD 015					35																				
				OB						351																				
					TD 020					26																				
				OB	S 020 TD 025					261 15																				
				08						146																				
				OB			1	556		119		673							15	149										

FERENCE	-1	SHIP	LATITUI	15	LON	GITUDE	DCTR		SDEN	STA	TION T	IME	YEAR	CRU		STAT		$\dashv$	OEPTH	OEPTH		WAY SERVA	ve Tions		WEA-	CLOUG			NOOC
BY ID. DE NO.		ODE		1/10	20/-	* 1/1		10*	11.	MÓ	DAY	HR.1/10		Ŭ N		NUM		- 1	NOTTO	S'MPL	S DIR	HGT	PER S		3000	TIPE A S	17		UMBER
1850	2	Εı	3500	N	041	900 W	_	113	58	$\rightarrow$			1968	E 1	6 05	59		4	206	03	24	11		3	x 1	0 3			0059
.,,,,,,	-		33-0	, ,				• • •	4	TER	-	WINO	BAR	+	AIR T		℃	ΤÍ	NO.	1	CIAL	٦' '						,	
									COLO	TRANS	DIR.	SPEED	MET	ER	ORY	W	ET	CODE	OBS. DEPTHS		VATION!	5							
									COOE	+	-	FORC	_		BULB	+	JL8					4							
	_							_	DT	50	35	503	22	/	261	2	39	7	12	ļ		<u> </u>					т	т	,
	M	ESSENGE TIME	CAST ND.	CAL		DĒPTH	lm I	١,	*c	5	٠/	SIG	1-AN		IFIC VOL		DY	Δ. D.		UNO	O <sub>2</sub> ml		04~P		A L = P	NO2-N	NO3-N		рн
	Н	R 1/10	1 110.	111	· E										UWALI-		,	103	AFL	OCIII		νū	- 41/1	ng.	- 01/1	μg - a1/l	yg = a1/1	µg - a1/1	
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	Ċ				D	000			440	36		24		0.0	3375	5 5	0.0	000		349									
		117	7	OB.		000		2	440		360	24	57						15	349									
					TO	001				36																			
				OB:		001					339																		
		001		0B:	10	002				36	40 399																		
		001			o To	002				36																			
				0B:	-	003					359																		
					TD	005				36																			
				OB:		005					339																		
					TD	007				36																			
				OB:		007	15				338																		
				S.	TD	010	0			36	34																		
				OB:	5	010	0			36	342																		
				S	ŢΩ	012	.5			36	36																		
				08	S	012	25			36	360																		
				S	ΤD	015	0			36	35																		
				OB:	S	015	0			36	354																		
					TΟ	020				36																			
				08	5	020	0			36	264																		
					TD	025				36																			
				OB:	S	025	0			36	159																		
				ов		027																							

100 NO. 1/10 1/10 0 10 1 MO OAY HE/1/10 NO. NUMBER BUTTON SMPL'S DIR HGG FER SEA	REFERENCE CTRY IO.	SHIP	LATHU	DE	LONGITUDE		ARSDEN DUARE	\$12	TION	TIME	YEAR	CRUIS		TATIO	N	OEPTH	01	H OB	WAV SERVA	VE TIONS		ER	CODE	2	STATIC	NC
WATER   WIND   SARO   ARR TEMP, TO   OSE   WEI   OSE	CODE NO.	10001	•	1/10	1/10		. 1.	MO	OAY	HR,1/16		NO	. N	UMB	ER	вотго	w 2.wb	L*S DIR.	HGT	PER 5	EA CO	Ut	TYPE A	W T	 NUMB	IE K
NET   COLOR   TAMAS   DIR.   CORT   MILE	318502	2 E 1	3500	N	04800 W	111	-		17	178	1968	E1				4297	7 0:	3 27		-   .	2   X	1	0 3		006	50
COLOR   TEAMS   DIR   CONT							W.A	TER	-				$\overline{}$				1 5	PECIAL								
Massing   CAST   CARD   TYPE   OPPTH (m)   T C   S '.4.   SIGMA-T   SIGMA-							COLOR	TRAN Imi		R. 01	· 172				B CODE	OEPTH	OBSE	RVATIONS								
STD   0000   2462   3635   2449   0034495   0000   15354   178   085   0000   2462   36345   2449   0034495   0000   15354							DT	SC	23	3 50	1 18	13 7	256	23	9 7	12	1									
178		TIME	약 NO.			(m)	ī tc		s ·4.	. 51	GMA-T				DYN. M			02 ml/								рН
178																										
STD 0010 3632 0B5 0010 36317 STD 0020 3638  001 0B5 0020 36382 STD 0030 3637 0BS 0030 36368 STD 0050 3629 0BS 0050 36287 STD 0075 3630 0BS 0075 3630 0BS 0075 36302 STD 0100 36317 STD 0100 36317 STD 0125 3632 0BS 0125 3632 0BS 0125 3632 STD 0250 3628 STD 0250 3628 STD 0250 3628 STD 0250 3628			_									00	34499	5	0000											
OBS 0010 36317 STD 0020 3638  O01 OBS 0020 36382 STD 0030 3637 OBS 0030 36368 STD 0050 3629 OBS 0050 36287 STD 0075 3630 OBS 0075 36302 STD 0100 36317 STD 0100 36317 STD 0125 3632 OBS 0150 3632 OBS 0150 3632 OBS 0150 3632 STD 0150 3632 STD 0150 3632 STD 0150 3632 STD 0250 3628 STD 0250 3628		178	8				2462			5 2	449					15	354									
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001 08S 0020 36382										1																
STD 0030 3637  OBS 0030 36368  STD 0050 3629  OBS 0050 36287  STD 0075 3630  OBS 0075 36302  STD 0100 3632  OBS 0100 36317  STO 0125 3632  OBS 0125 36319  STD 0150 3632  OBS 0150 3632  OBS 0150 3632  OBS 0150 3632  OBS 0150 3632  OBS 0150 3632  STD 0200 3629  OBS 0200 36288  STD 0250 3617		00	1							,																
OBS 0030 36368 STD 0050 3629 OBS 0050 36287 STD 0075 3630 OBS 0075 36302 STD 0100 3632 OBS 0100 36317 STO 0125 3632 OBS 0125 36319 STD 0150 3632 OBS 0150 3632 OBS 0150 3632 STD 0250 3628 STD 0250 3628		00	•							-																
STD 0050 3629  OBS 0050 36287  STD 0075 3630  OBS 0075 36302  STD 0100 3632  OBS 0100 36317  STO 0125 3632  OBS 0125 36319  STD 0150 3632  OBS 0150 3632  OBS 0150 3632  OBS 0150 3632  STD 0250 3628  STD 0250 3628										9																
OBS 0050 36287 STO 0075 3630 OBS 0075 36302 STO 0100 3632 OBS 0100 36317 STO 0125 3632 OBS 0125 36319 STO 0150 3632 OBS 0150 3632 OBS 0150 3632 STO 0200 3629 OBS 0200 3628 STO 0250 3617																										
08S 0075 36302 STD 0100 3632 08S 0100 36317 STD 0125 3632 08S 0125 36319 STD 0150 3632 08S 0150 3632 STD 0200 3629 08S 0200 3628 STD 0250 3617				OBS	005	0				7																
STD         0100         3632           0BS         0100         36317           STO         0125         3632           0BS         0125         36319           STD         0150         3632           0BS         0150         3632           STD         0200         3629           0BS         0200         3628           STD         0250         3617				ST	D 007	5		3€	30																	
OBS 0100 36317  5T0 0125 3632  OBS 0125 36319  STD 0150 3632  OBS 0150 36322  STD 0200 3629  OBS 0200 3628  STD 0250 3617				08.9	007	5		36	302	2																
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0BS 0270 36147																										

	10. NO.	SHIP	LATITU	- 1	LONGITUDE	DRIFF		ARE		TION T		YEAR	CRUISE	STATIO	N	DEPTH TO SOTTON	M.A. DEPT	H 08	WAVE SERVATI	SHOI	WEA- THER CODE	CODES		5	NODC TATION
,01	NO.			1/10	1/1	-	10"	1.			IR.1/10		NO.	NUMB	R		5'MP	L"S DIIL	HGT PE	P 5{A		TIPE A M	1	-	
31/8	502	£1	3501	N	04801 W		113				_	968		61		4297	03	21	,	2	X 1	0 3			0061
								W A	-	+	SPEED	BARO		TEMP T	- VIS	NO. 085.		PECIAL							
								COLOR	TRANS Imi	DIR.	OR FORCE	M ETER		BUL		DEPTHS	ORSE	RVATIONS	1						
								DT	SD	28	508	179	239	22	8 7	12	1		1						
	- 1	MESSENGE TIME HR 1/10	T NO.	CAR TYP		(m)	г	•	s	٠	\$1G A*	A = T	SPECIFIC VO		₹ ∆ 0 DYN. N x 10 <sup>3</sup>	. 1	UND	0 2 ml/	PO		TOTAL=P ug + st/l	NO2-N ug = 01/1	NO3+N	\$1 O4=5 ug = 01/	
	1	HR 1/10	+								+	-						+	+	_					-
	1		!	ST	D 000	0	2	472	36	39	245	0	00344	45	0000	15	357			- 1		1			1
		000	)	OBS		0		472	36	392	245			-			357								
				S T	D 001	0			36	38															
				OBS						382															
				ST					36																
		00	1	OBS						372															
				ST					36																
				085 ST					36	312															
				0BS						412															
				51					36																
				085						382															
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				OBS	010	0			36	322															
				s T	0 012	5			36	35															
				083	012	5			36	350															
				51	0 015	0			36	43															
				089	015	0			36	432															
				51	D 020				36																
				S1 085	D 020	0			36	277															
				51 085 51	D 020 020 D 025	0			36 36	277 13															
				S1 085	0 020 0 020 0 025 0 025	0			36 36 36	277															

REFERENCE	SHIP					MAR		STAT	ION T	IME			ORIGIN	ATOR	s		DEPTH	DEPTI			A VE	,	WEA-	CLOU				DC
CTRY IO.	CODE	LATITU	DE :	LONGITUO	E DOWN	SOU			GMT)		YEAR	CRUIS		STATIO NUMB		80	10 TTÇM	OF S'MPL	1 "		T PER		CODE	TYPE				TION
<del></del>	+				/10	10*	1	MO				+	+			1.	202	-			7.0		٠,					
31850	2  E1	3501	N	04803	W	113	58 WA		8 (	A D B	1968	-	AIR TE		- 1	-	392	03	27	7	1 1	2	X1	0 3		i	00	062
							COLOR	_	-	SPEE	D BAR	o-	DRY	W E		5.	NO. OBS.		ECIAL VATION									
							COOE	tm)	DIR.	FORC			BULB	BUL		0	EPTHS	OBSEK	V A 11014	,								
							DT	SD	22	510	) 15	9 2	39	22	8 8		15			7								
	MESSEN	R CAST	CA	en				T		T		SPECIE	c volu	IME	٤ ۵ ۱	0	501	JNO			PO4-P	1,0	OTAL-P	NO2-N	NO3-1	N SIO4	- 5,1	
	TIME	º NO.	TY		TH (m)	1	*C	\$	٠/	\$10	MA-T		AALY-I		DYN. x 10	M. 3		CITY	D 2 ml		ug = 01/		0 - 01/1	yg = a1/	µg - 01			pН
	HR 1/1	-	-			+				+				-		$\neg$	_			+		+-			+	1	$\top$	
	ı	į.	5	To oc	000	2	465	364	٠1	24	53	003	414	9	0000	0	153	356		- 1		1	- 1		I.	1		
	0.5	8	08		000		465	364		_	53						153											
		-			10	_		363	33																			
			08	5 00	10			363	334																			
					20			363																				
	0.0	1	OB		20			363																				
			08		28			363																				
			_		30			362																				
			08	-	30			362																				
			08		38			362 363																				
			OB		)50 )50			363																				
			08		)55			362																				
					75			363																				
			ОВ		75			363																				
					00			363																				
			OB	5 01	00			363	356																			
			S	TD 01	125			364	0																			
			OB	5 01	125			364	04																			
					150			364																				
			ОВ		150			364																				
			_		200			363																				
			ОВ		200				306																			
				-	250			36	-																			
			OB		250		588	36	186 156	24	568						151	160										
			ов	5 04	270	ı	208	30.	120	20	360							100										

REFERENCE	SHIP	LATITU	OE ]	LONGITU	DE	DRIFT	MARS	OEN		ION T		YEAR	CRUISE	ORIGINA	ATOR'S		OEPT	LIEPTI	н	085	WAV ERVAT	IONS	T	WEA-	CLOU		NODE	ON
CTRY 10.	COOE	•	1/10		1/10	D Z	10°	1.	MOIO	AY F	4R,1/10		NO.		U M SEF		00110	M S'MPL		DIR.	HGT P	ER SE	A C	ODE	TYPE A	A T	 NUMB	JER
318502	F1	3500	N	04800	) W		113	58	09 1	8	116	1968	E 16	063	3		429	7 03	T	23		1 2	2 :	xı	0 3		006	53
J1002	-1 -1	3,000		0.000		1 1		WA		-	WINO	BAR	<del></del>	AIR TEA		T	NO.	Τ΄	ECIA				•					
								COLOR	TRANS.	DIR.	SPEEC	MET	ER	ORY BULB	WET BULB		200	1 naces										
								DT	SD	23	511	14	6 2	44	228	7	12											
	MESSENG TIME HR 1/10	CAST NO.	CAI		EPTH :	(m)	т	*c	s	٠/٠.	SIG	MA-T		C VOLU		¥ ∆ 0 5YN. M x 10 <sup>3</sup>		OUNO	0	2 ml/l	1	4-P			NO2-6			рН
																											1	
	1		5		000			454	364			56	003	3890	0 0	000		5353										
	11	6	OB:		000		2	454		97	24	56					1	5353										
			-	_	100				36:																			
			OB:		001					358																		
					002				364																			
	0.0	1	OB.		002					397																		
					003				36																			
			OB		003				36	360																		
			OB.		005					20 278																		
					007				36																			
			OB		00 7					348																		
					010				36																			
			08		010					419																		
					012				36																			
			08		12					458																		
					015				36																			
			ОВ	-	015					399																		
					020				36	-																		
			-08		020					258																		
					025				36																			
			08		025	0			36	188																		
			ОВ		027			568	26	138	2.6	71					1	5153										

REFERENCE CTRY ID. CODE NO.	SHIP	LATITU		LON	GITUDE	DRIFT	รดก	ARE		TION	,	YEA	R	CRUISE NO.	s	ATOR'S	٧	1	TO TO	OEPTH OF S'MPL'	1	OBS		E FIONS		WEA- THER CODE	C	ODES		S	NODE TATION UMBER	
318502	E1	3500	1/10 N	045	100 V		113	+	мо 0 9		HR,1/10		А	E 16	_			43	389	03	_	5	nGI P		3	X 2		3			064	ĺ
J1p302	[ ]	3,000		040	,00 ,	,	1113	WA	-		WINO	1-T-	_	1		MP, C		4				□,	'		-	,		1,5	1	,		,
								COLOR	TRAN	_	5055	DM	ARO	• -	YSC	WET	VIS	: (	NO. OBS.	OBSERY	CIAL											
								CODE	imi		FOR		mbs)		ULB	BULB		0	EPTHS	OBJEK	• ~	"""										
								DT	SD	22	512	2 1	22	2	50	233	7	1	12													
	MESSENG TIME HR 1/10	U NO.	CA		OEPTH	( lm l	ı	*c		s ·/.	SIG	5MA-1	•	SPECIFIC	VOLU ALY-X1		₹ △ C OYN, A x 10 <sup>3</sup>	٧. ١	VETO ZON		02	m1/I		4-P		TAL-P g - 01/1		2-N - at/l	NO3-N 99 - 01/I	\$1 O 4 - \$1   ye - ot/f	ρН	S C C
									İ																							
	'			TD	000			460		41		155		003	396	2 (	0000	)	153													
	17	7	ов		000		2	460		411	24	155							153	355												
				ΙD	00	_				40																						
			08		00					396																						
	0.0			TO	00					41																						
	00	1	-08	TO.	000					411 28																						
			0B		00					28 2 28 2																						
				TD	00					36																						
			OB		00					361																						
				TD	00					36																						
			ОВ	5	00	75				362																						
			S	TD	010	00			36	39																						
			08		010	0.0			36	390																						
				TD	01	25			36	38																						
			08		01					382																						
				ŤD	01					41																						
			08	_	01					411																						
				TD	020					28																						
			08		020					280																						
				TD	02					17																						
			08 08		02					173																						
			Ub	J	02				30	1137																						

EFER	ID. NO.	COOE	LATITU	- 1	LONGITUDE	10		SDEN		(G M		YEA	R	CRUISE		TATION		DEPTH TO BOTTOM	DEPT OF	Н	085	WA V		5	WEA	.   1	LOUE	5		NODE
-	3502	E1	3500	1/10 N	04800	-	113	58		18	HR.1/10	1		NO, E16		UMBER			3 M/F			HGT	-	-	COD		PE AN	OT _		NUMBER
71	3302		3,000	, ,	34000	<b>"</b>	1113	WA	-	10	WIND	-			IR TEA		ŢÏ	4297	03		2 4			3	Хl	(	)  3	1		0065
								COLOR	-	s. a	SPEE	P M	ARO AETEI (mba)	2 0	ORY ULB	WET BULS	VIS.	NO. OBS. DEPTHS	OBSER OBSER	ECIAL VATIO										
								DT	SD	2		$\rightarrow$	0.5	2:	33	222	7	12		_										
		MESSENG TIME HR 1/10	of NO.	CAR		H (m)	,	*c	1	5	. 510	3MA-	,	SPECIFIC ANOM	VOLU!	u.E	103 103	SOL VELC	JND DCITY	02	m [/]		04-P - 01/1		) TA L = F		02-N - at/i	NO3-N	\$1 04-5 99 - 01/	
				51	00 Q1	00	2	450	36	39	24	•56		003	3862	, 00	000	153	352											
		23	6	085		-	2	450		38		•56						153												
				51						39																				
				083						38	5																			
		00	,	51						38	-																			
		00	1	0B5						37	>																			
				089						38!																				
				51						28	,																			
				085						27	5																			
				51						32	,																			
				085						32	4																			
				51	10 Q1	00				48																				
				085	01	00			36	47	5																			
				51	01	25			36	50																				
				08.9					36	49	5																			
				51					36	36																				
				085						35	5																			
				51						28																				
				085						28	3																			
				51						18																				
				083					36	17	5																			
				OBS	5 02					13																				

RY DE	IO.	SHIP	LATITU	OE 1/10	LON	GITUDE 11, 1	10 ¥		RSDEN WARE		TION T		YEAR	CRUI	32	STATIO	y v	OEPTH TO BOTTOA	DEPT	i H	OBSE	WAVE RVATE	ONS	WEA- THER COOE	_ c	LOUD		5	NOOC TATION UMBER
.,	3502	F1	3500		046	300 %	-	113		++			968	_	6 06		-+	4389	03		5	- 51 761	3			3			0066
	3002	,	3,000	14	040	,00	1		_	ATER	-	WIND	1	<u>, –                                    </u>		MP. C		NO.	T,		<u> </u>	1	1 )	, ^1	1 0	1 13	I		0000
									COLO		OIR.	SPEED OR FORCE	METE (mbs	R	ORY SULB	WET		240	Oassi	PECIAL RVATIO	NS								
									DT	SD	24	517	078	3	239	23:	7	13	1		$\neg$								
		MESSENGR TIME HR 1/10	CAST NO.	C A R TYP		ОЕРТН	(m)		T *C	2	*/**	SIGM	A-T		FIC VOLU		≨ Δ 0 DYN. M. x 10 <sup>3</sup>		UND	02	m1/1	PO <sub>4</sub>		FOTAL-P pg = 01/1		) <sub>2</sub> =N - at/f	NO3-N ug - 01/I	SI O4~Si µg = ot/l	pH
				s T	_	000	10	١.		1	. 0	1	_	00	2247	. 1,		,,	200				ŀ					1	
		057	,	085	_	000		_	2441 2441	36	40 403	246 246		00	3347	4 (	000		350 350										
		051		51		000		-	2441	36 36		246	U					15	350										
				035		001					413																		
				5 T		002				36																			
		001		OBS		002					413																		
				51	0	003	30			36																			
				OBS	5	003	30			36	376																		
				OBS	,	003	88			36	278																		
				51	Q	005	0			36	31																		
				OBS		005				36	308																		
				ST		007				36																			
				08.5		007	75			36	329																		
				ST		010				36																			
				OBS		010					378																		
				ST		012				36																			
				OBS		012					393																		
				51		015				36																			
				OBS		015					372																		
				51		020				36																			
				OBS		020					273																		
				ST		025				36																			
				OBS		025					153																		
				OBS	•	027	, 0			30	142																		

	ATITUDE LO	NOTIONS NOTIONS	MARSDEN SQUARE	STATION T (GMT)	YEAR	CRUISE NO.	STAT NUA	ION	DEPTH TO BOTTOM	MAX. DEPTH DF S*MPL*S	OBS	WAVE ERVATION	SNC	WEA- THER CODE	CLOUD CODES		5	NODC STATION NUMBER
318502 E1 3	502 N 04	+801 W	113 58		117 1968				4389	03	25		3	x1	0 3			0067
				T +	BAR SPEED 145	U	AIR TEMP	VIS	NO, OBS.	SPEC								
			CODE		SPEED MET			VET COD	DEPTHS	OBSERV	ATIONS							
			DT	50 26	513 07	1 2	44 2	28 7	12									
MESSENGR TIME OF	AST CARD	DEPTH (m)	1 °C	s */	SIGMA-T		VOLUME ALY-XIO <sup>7</sup>	X 103 S △ D		DOLLA	02 ml/l	PO 4		101AL-P µg = 01/1	NO2=N pg = a1/l	NO3-N pg - at/l		
	STO	0000	2442	3635	2456	003	3856	0000										
117	085 STD	0000	2442	36354 3635	2456				15	350								
	085	0010		36354														
	SID	0020		3640														
001	085	0020		36396														
	STD	0030		3631														
	085	0030		36313														
	5 T D	0050		3629														
	085	0050		36294														
	STD	0075		3632														
	085 STD	00 <b>7</b> 5		36319 3635														
	085	0100		36354														
	510	0125		3639														
	085	0125		36391														
	STO	0150		3634														
	08.5	0150		36344														
	510	0200		3623														
	085	0200		36232														
	SID	0250		3611														
	085 085	0250 0275	1553	36114 36104	2672					149								

CTRY ID.	SHIP	LATITU	OE 1/10	ONGITUDE	NDC	MARSO SQUAI	RE	STATION IGM	11		YEAR	CRUISE NO.		ATOP' OITATIO	N		0191H TO D110M	MAX. DEPTH OF S'MPL'S	OB		VE JIDNS PER SE		WEA- THER CODE	CLOUI CODE	5		NOOC STATION NUMBER	
318502	E1	3500	N C	4800 W	1	13	58 0	9 19	17	7 1	968	E16	06	8		4	297	03	23		4	4	X 1	0 3			0068	3
							WAT	ER	WIN	D	BARC	′	AIR TE	MP. °C			NO.	SPEC	LAI	1								
							OLOR	TRANS. DI	R.	OR OR	METE	R   C	DRY ULB	W E	1  00	200	OBS.	OBSERV										
						-	-		-+-	ORCE	(mbs	_		-	-	-												
		,		-			DT	SD 24	+ 15	11	041	7	56	22	8 7		13								,	_		
	MESSENGR TIME	CAST	CARD	DEPTH	m)	т.	°C	5 %.		SIGM	A - T	SPECIFIC	volu		Σ Δ 01N,	0 M.	SOL		O <sub>2</sub> ml/	PC	04-P			NO <sub>2</sub> -N	NO3-N			Š
	HR 1/10	Ť NO.	TYPE									ANOM	ALY-E:	۰ ا	x 10		VELC	CITY		₩ 9	- a1/I	ηg	- a1/1	ид - al/l	µg - a1/	μg = 01.	1	c
																				1								
	1		STD			24		3641		245		003	394	8 (	000	0	153											
	177	'	085	0000		24	58	36409	5	245	5						153	154										
			510					3639																				
			085 510	0010				36391	ı																			
	001		085	0020				3639 36387	7																			
	001		510					3634	•																			
			085	0030				36335	5																			
			085	0038				36284																				
			STO	0050	)			3633																				
			085	0050				36326	5																			
			STO					3632																				
			085	0075				36315	5																			
			STO					3633	,																			
			085 5T0	0100				36326 3637	•																			
			085	0125				36369																				
			510					3638																				
			085	0150				36377	7																			
			510					3634																				
			085	0200	)			36336	5																			
			STO					3621																				
			OBS	0250				36208																				
			085	0274	ŀ			36126	5																			

9555	RENCI	-	т —			1	MAR	CO EN	C 2 A	TION	TIME	_		T	0.81	IGINA	10.015			1	AAX, T			-	-	T -	Τ.		Т	1	
CTRT	T io.	SHIP	LATIT	301	LONGITUDE	DELF	ື້ເດີນ	ARE	310	IGM	IT)		YEAR	CAL	JISE		ATION		DEPTH	D	EPTH	01	A V R Z		15	WEA	ŧ	COOF		ST	A TIÓN
100	NO	, CODE	· ·	1/10	1/1		10°	1.	MO	DAY	HR,1/	10			0.		MBER		BOTTON		MPL'S	DU.	HGT	PER	\${ A	CDD	1	TPL A W	1	NI	JMBER
31	BSC	2 E1	3500	) N	04800 W		113	5B	09	19	237	լ	968	E	16	069			4297		03	24			3	X1		0 3		0	069
								WA	-	T	WIND		BAR	0-	AIR	TEM	P. 10	V15.	NO.	ľ	SPEC	IA I	]								
								COLOR	TRAN		IR. I	t EO	M ET		OR1		WET	con	ORS. DEPTHS	08	SERVA										
								DT	SD	+		2	03	$\rightarrow$	23	-+-	228	7	12	┼			-								
				т —			_	01	130	-	7 31		103		23.		_	٦.	1	l			4		-					 - 1	
		MESSEN TIME HR 1/	CAST NO.	CAP		(m)	1	*0	,	*/.	.   :	SIG M	A-T		CIFIC V		£   \$	∆ 0 YN. M X 10 <sup>3</sup>	. VEL	OCIT		D <sub>2</sub> ml		04-P		DTAL- yg - al/		0 <sub>2</sub> - N g - 01/I	NO3	4-Si - 01/1	рн
											$\top$																				
				51				452	36			45	-	00	343	308	0	000	15	35	2 ်		'								
		23	7	OB S			2	452		33		45	1						15	35	2										
				51						36																					
				0B\$						36																					
		00	1	08:						36 36																					
		00			TD 002					29																					
				OB:						29																					
				5						25																					
				OB S	5 005	0			36	24	9																				
				51						30																					
				OB:						29																					
					TD 010					30																					
				OB:						290																					
				085						34 33																					
					TD 015					31																					
				OB:						31																					
					TD 020					23																					
				OB:						231																					
				ς.	TD 025	'n				23																					
					10 02																										
				OB:	5 025	0			36	22	6																				

GR (	CAST NO.	CARD TYPE  STD OBS STD	0000 0000	T	SB WA COLOR CODE DT	TER TMANS (m)	٧	STED ON FORC	A.C.1	ER I	AIR TEN	P. "C WET BULB	VIS.	NO. OBS. OEFTHS	OBSERV		7		4 X	1	0 3			0070
10 1	CAST NO.	STD OBS	0000	T	COLOR CODE	SD	DIR.	SPEED ON FORC	e (mbi	ER 1) 0	DRY	WET	VIS.	OBS.										
10 1	CAST NO.	STD OBS	0000	T	DT	SD	19	S1B	t (mba	3 8	ULB		CDDE				e l							
10 1	CAST NO.	STD OBS	0000	+		1	1	518	$\rightarrow$	5 2	44			OFFIRS			1							
10 1	NO.	STD OBS	0000	+	10	s	٠/	1				233	7	12			7							
1		OBS	0000	24				SIG	MA-T	SPECIFIC	C VOLUA	.   0	ΔD YN. M x 10 <sup>3</sup>		DCITY	02 m		04-P - at/l	IDTAL PD - G		NO2-N vo - 01/1	NO3-N vg - a1/l		
8		OBS	0000	24																$\top$				
8					457	363		24		003	4186	0	000	15:										
				2	457	363		24	53					153	353									
		OBS	0010 0010			363 363																		
		STD	0010			363																		
1		OBS	0020			363																		
•		STO	0030			363																		
		OBS	0030			363	50																	
		STD	0050			363	3																	
		OBS	0050			363																		
		STD	0075			363																		
		OBS	0075			363																		
		STD OBS	0100 0100			363 363																		
		STD	0125			364																		
		OBS	0125			363																		
		STD	0150			363																		
		OBS	0150																					
		STD	0200			362	20																	
		OBS	0200																					
			STD	STD 0200 OBS 0200 STD 0250 OBS 0250	STD 0200 OBS 0200 STD 0250 OBS 0250	STD 0200 OBS 0200 STD 0250 OBS 0250	STD 0200 362 OBS 0200 362 STD 0250 363 OBS 0250 363	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618B	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618B	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618B	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618B	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 36188	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618B	STD 0200 3628 OBS 0200 36279 STD 0250 3619	STD 0200 3628 OBS 0200 36279 STD 0250 3619	STD 0200 3628 OBS 0200 36279 STD 0250 3619	STD 0200 3628 OBS 0200 36279 STD 0250 3619	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 36188	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618B	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618B	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618B	STD 0200 3628 OBS 0200 36279 STD 0250 3619 OBS 0250 3618B

REFERENCE SHIP	E LAINUU	E LON	IGITUDE E	MAR SOU	ARE	STATION (GA		YEAR			OR'S TION MBER	OEPTH TO MOTTOB	DEPTH OF S'MPL'	085	WAVE ERVATI HGT PE	ONS	WEA- THER CODE		2	S	NODC STATION NUMBER
318502 E1	3500	N 048	800 W	113		09 22	119	1968				3200	03	34		4	X 2	0 3			0071
					WA	· · · · · ·	WIND		RO-	AIR TEMP	VIS	NO. OBS.		CIAL							
					COLOR		OIR, SPE	R I			WET COD	GEPTHS	OBSERV	ATIONS							
					01	SD 3	3 51	0 1:	15 20	06 1	.89 7	12									
MESSET TIM HR 1.	NGR CAST	CARO TYPE	DEPTH (m)	τ	*c	s */	s	IGMA-F	SPECIFIC	VOLUME	₹ △ 0 0 y N . A x 10 <sup>3</sup>		OCITY	02 ml/l	PO 4		TOTAL=P ug = qt/f	NO2-N ug - of '			
		STD	0000	2	295	3629	2	495	00.30	0159	0000	15	313		1						
1	19	OBS	0000		295	3629		495	00 )	01))	0000		313								
-	• •	STD	0010	_		3629															
		085	0010			3629															
		STO	0020			3629															
0	01	OBS	0020			3629															
		STD OBS	0030			3629 3629															
		STO	0050			3627															
		OBS	0050			3627															
		STO	0075			3625															
		085	0075			3625	3														
		STD	0100			3634	•														
		085	0100			3633															
		510	0125			3636															
		OBS STD	0125 0150			3636 3635															
		085	0150			3635															
						3631															
		510	0200																		
		STD OBS	0200 0200			3630															
				1	628		8	663	001	4967	0564	15	169								

CODE NO. CODE 1/10 1/10 1/10 2 1/10 2 1/10 1 1/10 2	
17. 10 17.0 10 1 MO DAY HELITO NO. NO. SMELS	OIR. HGT PER SEA CODE TYPE AMT NUMBER
WATER WIND BARD AIR TEMP, C NO. COLO	
COLOR THANS, CORE (mb) OIR SHEED ARTER ORY WEI COLD OBS. OBSERVA	
MESSINGS CAST TIME of NO. TYPE DEPTH (m) T ℃ S %. SIGMA—T SPECIFIC VOLUME ANDMALY—1107 OYN, M. 103 VELOCITY	O2 ml/l PO4~P TOTAL-P NO2-N NO3-N SIO4-SI PH NO2-N NO3-N SIO4-SI

Table XI.—Observed and interpolated oceanographic data for stations taken by USCGC DALLAS at Ocean Station ECHO, 23 September-11 October 1968, prepared from NODC listing No. 31-1381

REFERENCE	т Т					_=	MAR	OEN	STAT	ION TI	M.E.			ORIGIN	ATOR'S		DEP	тн	MAI		WAY	/ E	WEA-	CLOUD			NODC
CTRY ID.	CODE	LATITU	OE		ITUDE	DC#	squ	ARE	-	GMTI		YEAR	CRUISI		TATION		To	0	DEPTH OF	089	SEPVA	TIONS	THER	COOES			TATION
CODE NO.	1000	•	1/10		1/10		10"	1-	MOI	HTAC	R, 1, 10		NO.		NU AN BER		1011	10 M	S'MPL'S	DB.	HGT	PER SEA	CODE	TTPL A W	T		NU MREP
311381	DG	3457	N	048	09 W		113	48	09 2	23 1	33 1	968	E17	00	1		500	00	13	04	3	3	X4	8 5			0001
, , , , , , ,								WA	TER	W	IND	BARC		AIR TE	WP TC		NO	5. T			, ,		,				
								COLOR		OIR.	SPEED	METE	R	DPY	WET	COD	E DEF	ss.   _	SPEC DBSERVA								
								CODE	lm I	U.S.	FORCE	(mba	1	NULE	BULB		DEP	1 11 2									
										33	510	173	3 2	11	167	7	14	4									
	MESSENGE	I										1		C VOLU		E A D		SOUN			1			NO2-N	NO3-N	5104-5	
	TIME	NO.	CA TY		DEPTH	m)	1	*C	5	*/	SIGM	A-T		ALY-XI	07	* 103	١. ١	VELOC		02 mi/1		Da=P - e1/1	1014 L=P µg = s1/I	NO2-N	μg - αI/I		
	HR 1/10	-					-		+		-				-	A 10.	-		-+-			-			-	+	+
				_		_			,		1	_							!		+					i	
				TD	0000			254	361		250		002	882	8 0	000		153									
	133	,	OB.		0000			254		323	250							153									
				TD	001		_	255	36:		250			884		029		153									
				TD	002		_	255	361		250		002	885	1 0	058		153									
	133	,	OB.		002			255		335	250		00.5	897	2 0	087		153: 153:									
			_	TD	003			254 253	36	307 307	250 250		002	891	2 0	087	-	153 153									
	133	,	OB.	S TD	004		_	203 109	36		250		003	524	0 0	141		152	_								
	133		OB		006		_	889		327	260		002	. ) 2 4	0 0	1 - 1		152									
	193	,		TD	007		_	834	36		262		00.1	823	۸ ۵	195		152									
	133		OB	-	008		_	787		351	263		001	.025	0 0	1))		151									
	133	,		TD	010			770	36:		264		00.1	663	9 0	239		151									
				TD	012		_	737	36		265			580		279		151									
	133	a .	ОВ	-	013		-	730		388	265			,,,,,	_			151									
	10.	_		TD	015			700	36		265		001	520	6 0	318		151									
	133	۹	ОВ		017			668		323	266							151									
	• • • •			TD	020		_	636	36		266		001	464	4 0	393	3	151	64								
				TO	025			583	36		267	0	001	435	0 0	465	;	151	55								
	133	3	OB		026			572	36	135	267	0					:	151	53								
			S	TD	030	0	1	551	36	07	267	0	001	445	8 0	537	7	151	52								
	133	3	OB	S	035	0	1	495	35	967	267	15						151	42								
			S	TD	040	0	1	389	35	80	268	15	001	1328	0 (	676		151									
	133	3	OB	S	T044	2	1	306	35	685	269							150									
			S	TD	050	0	1	226	35		269	8	001	212	3 (	803	3	150	73								
	133	3	OB	-	052					504																	
				TO	060			083	35		271			049		916		150									
			_	TD	070			934	35		273		000	875	7	012		149									
	133	3	08		T071			919		339	273		000		<b>-</b> .	00-		149									
			_	TD	080			763	35		275		000	712	/	092		149									
	13:	3	ОВ		088	_		640		134	276		00/	)597		157		149 149									
			_	TD	090			633	35		276			)541		214		149									
			_	TD	100			583	35		277			) 484 ) 484		265		149									
				TD	110			533 483	35 35		278			)404 )429		311		149									
				TD	120			434	35		278			373		351		149									
	3.2	•		TD	130			420		131	278		000	0010	′ '	ارر		148									
	13:	,	ОВ	3	T132	1	U	Z U	20	101	210	, ,						0	. , ,								

FERENCE							enes. I						New York	ATOR'S	T		MA	х.		AVE		CLOUD			
	SHIP	LATITU	DE	LONGITUD		MAR SQL	SDEN IARE	STATIO	N TIM MTI	E Y	EAR	CRUISE		TATION	-	OEPTH TO	OEPT	TH		VATIONS	THER			si	NODC
10. E NO.	COOF		1/10	* 17	10	ž 10°	12	MO DA	Y HR,	1/10		NO.		UMBE		ROTTOR	A S'MP		IR. H	GT PER S	COOL	TYPE AM		_   N	UMBER
11381	DG	3502	N	04804	w	113	58	09 24	12	8 19	968	E17	00;	2		36D0	15	5 0	5 6	, 5	×ı	6 4			0002
,	, , ,					,	WA		WI		BARO	-	IR TEA		1	NO.	Ť		Ť)'Ĭ						
							COLOR		OIR.	SPEED	METE	R C	RY	WET	CODE	OBS.	Carre	PECIAL RVATIO	NS						
							CODE	(m)		FORCE	(mbs)	-	JL#	BULE	-	-	1—		_						
								2	7 5	505	200	2	11	161	7	14									
	MESSENGR		CARE		H (m)	,	*€	5 ./		SIGMA	1 - T	SPECIFIC		ME :	E A D	sc	ONU	02	m I / I	PO4~P	FOTAL-P	NO2-N	NO3-N	S1 O S1	рН
1	HR 1/10	NO.	TYPE		., .,,,	'   '				3101111	,_,	MOM	4 (Y = Y1)	۰′ ۱ '	x 10 <sup>3</sup>	, A£1	LOCITY	0,		ا/۱۵ - وبر	µg - a1/1	µg + 01/1	yg - a1/1	μg - σ1/l	, ,,,
1																									
1	1	1	sT	oo d	00	່ 2	301	3635	, ,	249	7 '	002	993	<b>5</b> 0	000	15	315	1	ŧ		1	'		'	
	128	ı	OBS	_	00		301	3634		249							315								
			ST		10	2	300	3635	5	249	7	002	995	2 (	030		317								
			ST	D 00	20	2	299	3635	5	2491	8	002	996	2 (	060	15	318								
	128		0B\$		25		299	3634		2491							319								
			ST		30		281	3636		2504		002			090		315								
			ST		50		146	3639		2544		002	564	9 (	145		285								
	128		OBS		50		146	3638		2544							285								
	128	,	OBS		74		848	3639		2624		001					207								
			ST	_	75	_	844	3639		2624		001	B 1 1	4 (	199	_	206								
	128	•	OBS		99 00		778 777	3638 3639		2640		001	440	, ,	242		191								
			ST ST		25		761	3642		264		001			243 284		191								
	128	ı	OBS		47		746	3642		265		001	010	· (	204		190								
	120		ST		50	_	744	3642		265		001	578	8 (	1324		190								
	128	3	OBS			_	708	3636		2656							186								
			ST		00		704	3636		265		001	546	5 (	402		186								
			ST.	D 02	50	1	652	3627	7	266	2	001	509	5 (	478	15	177								
	128	3	OBS		93		598	3618	36	2661	8						167								
			\$T		00		585	3616		266		001	455	2 (	1552		164								
	128	3	OBS		89		444	3593		268			<b>.</b>				131								
			ST		00		438	3592		268		001	342	6 (	692		131								
	128	3	OBS		87		351	3579		269		001	240				115								
	120		ST OBS		00 84		328 177	3576 3553		2694 2701		001	200	о (	822		109 5069								
	128	,	ST	-	00		140	3549		271		001	117	я (	941		058								
			ST		00		932	3526		272		000			044		997								
	128	3	OBS		79		795	3513		274		500	, ,0	- '		_	957								
		-	ST		οó		765	3512		274		000	789	1 1	130		949								
			ST		00		639	3508		275		000			202		916								
	128	3	OBS	-	72		565	350		276					_		898								
			ST		00	C	556	3509	5	276		000	564	1 1	263	14	899								
			ST	D 11	00	C	525	3509	5	277		000	538	1 :	318	14	903								
			ST		00	0	494	3504	4	277		000			370		907								
			ST		00		463	3503		277		000			420		911								
			ST		00		432	350:		277		000	458	6 ]	467		914								
	128	3	OBS	114	54	C	415	3502	22	278	1					14	916								

REFERENCE	SHIP			- =	MARSDEN	STATION T		ORIGINAT	OR'S		AAI	WAVE	WEA	CLOUO	1		HOOC
CTRY ID.	CODE	LATITU	0E L0	NGITUDE TO	SOUARE 10" 1"	IGMT)	YEAR R,1/10		TION MBER	10	OF MPL'S OF	HGT PER S	THER	CODES			TATION NUMBER
31138	l og l	3502	N 0	4807 W	113 58	-	130 1968			3600	14 04	0	X1	6 3			0003
					COLO		SPEED MET		WET COD	NO. OBS.	SPECIAL						
					CODE	(m) OIR.	Off (mb		BULB	DEPTHS	SERVATIONS						
		, ,		· · · · · · · · · · · · · · · · · · ·		36	502 21	3 211	172 7	14							
	MESSENGE TIME HR 1/10	NO.	CARO TYPE	DEPTH (m)	T 10	s ·	SIGMA-1	SPECIFIC VOLUME	₹ △ D 0 YN A x 10 )	SOUND		/1 PO4-P	101AL=P =g+=1/1	NO2-N +9 - at/1	NO3-N	\$1.0 a=5 y0 o1/	
												İ		1			
	130	,	STD	0000	2291	3636	2501	0029544	0000								
	150	,	STD	0010	2291 2290	36364 3636	2501 2502	0029562	0030	1531							
			STD	0010	2289	3636	2502	0029582	0059								
	130	)	085	0024	2289	36364	2502	0027710	0000	1531							
			STD	0030	2286	3638	2504	0029410	0089								
	130	)	085	0049	2185	36416	2535			1529							
			SID	0050	2167	3641	2540	0026054	0144	1529	0						
	130	)	OBS	0073	1863	36395	2620			1521							
			STD	0075	1854	3640	2623	0018282	0199	-,-							
	130	J	OBS	0098	1775	36416	2644			1519							
			STD	0100	1774	3642	2644	0016319	0243								
	130	1	OBS	0125 0145	1761 1750	3646 36464	2650 2653	0015810	0283	1519. 1519							
	430	,	STD	0150	1748	3646	2654	0015591	0322								
	130	)	OBS	0194	1720	36406	2656	0017571	0322	1519							
			STD	0200	1713	3639	2657	0015455	0400								
			STD	0250	1650	3628	2663	0014977	0476								
	130	)	obs	0288	1595	36181	2668			1516	5						
			STD	0300	1574	3614	2670	0014454	0549								
	130	)	OBS	10383	1434	35908	2683			1512							
	12/		STD	0400	1405	3586	2686	0013174	0688								
	130	J	085	T0474 0500	1293	35699 3567	2697	0012106	001/	1509							
	130	1	STD	0567	1270 1187	35581	2699 2708	0012105	0814								
	130	,	STD	0600	1105	3548	2716	0010603	0928	1507 1504							
			STD	0700	0890	3524	2734	0008827	1025								
	130	)	085	10750	0800	35160	2742	0000021	102	1495							
			STD	0800	0730	3514	2751	0007209	1105								
			STD	0900	0610	3509	2763	0005972	1171								
	130	)	OBS	0943	0566	35078	2768			1489							
			STD	1000	0549	3507	2769	0005387	1228								
			STD	1100	0518	3506	2772	0005170	1280								
			STD	1200	0487	3505	2775	0004956	1331								
			STD	1300	0456	3504	2778	0004739	1379								
	12/		STD	1400	0426	3502	2780	0004516	1426								
	130	,	OBS	T1444	0412	35019	2781			1491	,						

ICE						T -T	MARS	Deal		*10																	
10. 10.	CODE	LATITI	UDE 1/10	rc	1/10 Y	N DC 78	\$00.			IGMT	1R,1/10	YEAR	CRUISE HO.	5	TATION TATION	4	DEPTH TO BOTTON	MA DEPT OF	H OI	WAVE SERVATI	ONS	WEA	COC			5	NODC TATION
381	DG	3458	3 N	04	758 W		113	47					1	_				S'MPI	."S DIR	HGT PE	SEA	coo	TYPE /	MT		N	UMBER
						' '	ار د د	WA			128			OO4			5000	14	36	12 13		X1	3	4			0004
							ľ	COLOR	TRAN		SPEED	RAR	۰ –	DRY	WET.	vis	NO. 085.		ECIAL							•	
								CODE	(m1	UIR,	FOACE			ULA	BULB	COD	OEPTHS	OBSER	VATIONS								
										09	512	19	6 2	22	189	7	12			1							
	MESSENGR TIME	CAST NO.	CAF		DEPTH (	n)	1	'n	5	٠/	SIGA	AA-1	SPECIFIC	VOLUE	ME 3	Δ D	·	JHD		1							
	HR 1/10	-		_							110"		ANOM	ALY-RIG	"	YN. M X 10 <sup>3</sup>	VELO	CITY	O 2 ml/	PO4-	. 1	01AL-P	NO2-1			104~51	рН
		i													+		_			-		<u> </u>	-	700	1,00	- 0// I	
			S 1		0000		23	13	36	46	250	)2	002	9405	٠' ۸	000	1 15	220								ĺ	
	128		083		0000		23	13	36	455	250			, , , ,	, 0	000	153										
			S 1		0010		23	13	36		250		002	9512	١ ،	030	153										
			51		0020		23	12	36	46	250		0029		_	059	153										
	128		085		0021			12		457	250				. 0	0,19	153										
			ST		0030		23	10	364	5	250		0029	2558	0	089	153										
	128		085		0041			8 0	364	445	250	3	_		•	• • •	153										
	120		ST		0050		20		364	+0	256	1	0024	025	0	142	152										
	128		OBS		0063		18		36	361	261	5			•		152										
	120		ST		0075		18		363	36	263	1	0017	518	0	194	151										
	128		085		0083		17		363	60	263	8				- / .	151										
			ST		0100		17		363	8	264	6	0016	141	0	236	151										
	120		ST		0125		17		363	19	265	3	0015			276	151										
	128		OBS		0126		17		363		265	4			- '		151										
	128		ST		0150		17		363		265	6	0015	337	0:	114	151										
	120		OBS ST		T0166		17		363		265						151										
			ST		0200		16		362		266		0014	922	0:	90	151										
	128		OBS		0250		15		361		266		0014	398	04	63	151										
	120		ST		0251 0300		15		361		266						151	59									
	128		085		0300		15		360		267		0014	015	0.5	34	151										
			ST		0400		148		359		267						151	37									
	128		OBS	_	T0429		135		358		268		0012	896	06	69	151	14									
			STI	n	0500		127		357		269	_					151	05									
	128		OBS	_	0512		126		357	9	270	2	0011	787	07	92	150	92									
			ST	n	0600		117		25.	£	27.	,															
			ST		0700		107		356 355		2716		0010			04	150										
			ST		0800		097	_	354		2729		0009			05	150										
			ST		0900		087	_	354		2740		0008			96	150										
			ST		1000		077		353	_	2750		0007		11		150										
			ST		1100		068		352		2759		0006		12		1498										
			STE		1200		058		351 351		2766		0006		13		1496										
			STO		1300		049	_	350		2773		0005		13		1494										
	128		OBS		T1362		043	_	350		2778		0004	199	14	24	1492										
							V 7 3	-	الار	+ 2	2780	,					1490	9									

REFERENCE	SHIP LATITU	10	NGITUDE ES	MARSDEN	STATION TI		ORIGINATO	u's	DEPTH DEPTH		WAVE	WEA-	crono			400C
CODE NO.	CODE	1/10	NGITUDE BE		MO DAY H	YEAR	CRUISE STAT		TO OF	0.7	ERVATIONS	THER	CODES		2.	UA-BER
	DG 3508						+			+	HGT PEI SI					
311381	100 13500	N   04	734 #	113 57 0		27 1968	110 75		3600 15	19	7 2	× 1	6 6			0006
				COLOR	TRANS DIR	SPEED MAR	U• <del></del>	ET CODE	O85.   0 855 m	CIAL						
				CODE	rm   UIK,	FORCE (mb		nra Coor	DEPTHS	2110113						
					18	512 12	2 244 2	39 7	14							
	MESSENGE CAST	CARD	DEPTH (m)	1 70			SPECIFIC VOLUME	₹ ∆ D	SOUND		PO4-P	TOTAL-P	NO2-N	NO3-N	\$104-5	. ,
	TIME OF NO.	TYPE	OEF IN SHI	1	s ·/	SIGMA-T	ANDMALY-1107	X 103	VELOCITY	0 2 m1/L	yg = 01/1	yg = 01/1	µg - a1/1	yg - a1/5	yg = at/1	PH C
											1					
	'	STO	0000	2252	3623	2502	0029459	0000	15302		1				1	
	127	085	0000	2252	36228	2502			15302							
		STD	0010	2244	3625	2506	0029150	0029	15301							
		STD	0020	2235	3626	2509	0028846	0058	15301							
	127	OBS	0024	2232	36268	2511			15301							
		STD	0030	2165	3637	2538	0026213	0086	15286							
	127	OBS STD	0048 0050	2006 1993	36552 3655	2595 2598	0030535	0122	15249							
	127	OBS	0030	1889	36546	2625	0020535	0133	15246 15221							
	121	STD	0075	1883	3655	2626	0017934	0181	15219							
	127	085	0095	1848	36538	2635	0017454	0101	15213							
		STD	0100	1843	3654	2636	0017127	0224	15212							
		STD	0125	1820	3652	2640	0016757	0267	15209							
	127	085	0143	1806	36512	2643			15208							
		STD	0150	1801	3651	2644	0016478	0308	15208							
	127	085	T0191	1776	36474	2648			15207							
		STD	0200	1776	3647	2647	0016362	0390	15208							
	127	STO	0250	1761	3644	2649	0016404	0472	15212							
	127	OBS STD	0284 0300	1739 1724	36415 3639	2652 2654	0016045	0554	15211 15209							
	127	085	0378	1623	36197	2663	0016045	0554	15189							
	12 /	STO	0400	1575	3611	2668	0015006	0709								
	127	OBS	0473	1434	35873	2681	0017000	0.07	15141							
		STD	0500	1401	3582	2684	0013667	0852								
	127	OBS	0568	1298	35675	2694			15110							
		SID	0600	1214	3556	2701	0012072	0981	15085							
		STD	0700	0981	3528	2722	0010074	1092								
	127	OBS	T0759	0865	35166	2732			14981							
		STD	0800	0798	3514	2741	0008260	1183								
	127	STO OBS	0900 0956	0655 0588	3509 35072	2757 2 <b>7</b> 65	0006618	1258	14922 14905							
	127	STO	1000	0573	35072	2766	0005763	1320								
		STO	1100	0539	3505	2769	0005504	1376	14909							
		STD	1200	0505	3504	2772	0005248	1430	14911							
		STD	1300	0471	3503	2775	0004990	1481	14914							
		STD	1400	0437	3502	2778	0004729	1529	14916							
	127	085	T1457	0417	35008	2780			14918							

SHIP CODE	LATITUDE 1/16	LONGITUDE 1/10	SQU SQU	ARE 1°	STATION (GMT)		YEAR	CRUISI NO.	E	IATOR'S STATION NUMBER		DEPTH TO BOTTO	GEPTE	1 0	BSERV	A VE 'A TION!	COL	R	CLOUD COOES			NOOC STATION NUMBER
881 DG   1	1507 N	04800 W	113	58	09 27	128	1968	E17	00	5		3400	12	34	. 4	3	×ε		6 6			000
				WA		WIND	BAR	U+	AIR TE	T	vis	NO.	S PE	CIAL	7							
				COLOR	1RANS. DIR.	SPEE OR FORG	I WELL		BULB	BUL8	CODE	OBS. DEPTHS	OBSER	VA TION	5							
					09	520	17	3 2	28	217	7	14	1									
MESSENGR TIME OF HR 1/10	CAST CAT		m) †	*C	5 -4.	510	SMA-T		C VOLU	IME D	∆ D YN. M x 10 <sup>3</sup>	. VEL	OCITY	01 m		PO 4-P	101A L		(O2-N g - 01/l	NO3-N vg - 01/1	\$1 O4=5 µg = a1/	
		70 200/		25.0	2425	1 25		003	0.74	2 0	000	1.5	205		- 1							1
128	08:	TD 0000 S 0000	_	258 258	3635 36350		510 510	002	874	2 ()	000		305									
120		TD 0016	-	250 251	3636		512	00.7	853	3 0	029		305									
		TD 0020	_	224	3637		521		779		057		300									
128	OB:			224	36365		21	002	, , ,				300									
		TD 0030		180	3634		31	002	683	6 0	084		290									
128	OB:			116	36316		47		000				274									
	5	TD 0050	) 1	970	3650		000	002	031	9 0	131		239									
128	OB:	S 0058	1	901	36578	26	24					15	222									
	S	TD 007	1	863	3656	26	33	001	731	1 0	178	15	214									
128	083	S 007	1	859	36562	26	34					15	213									
		TD 0100		836	3655	26	39	001	685	0 0	221	15	210									
128	OB:			822	36546		642						209									
		ID 012		817	3654		643		655		263		209									
		TD 0150		801	3652		45	001	640	6 0	304		208									
128	OB:			798	36518		46	001					208									
128	OB:	TD 0200 S 0233		777 758	3651		50	001	608	2 0	385		209									
120		TD 025		754	36487 3647		553 553	001	600	0 0	465		209									
		TD 0300		714	3638		556		588		402 545		205									
128	0B:			699	36356		557	001	200	9 0	949		203									
128	0B			528	36054		74						160									
•		TD 0400		517	3604		75	001	424	2 0	696		158									
128	OB:			439	35916		83		_	- •			142									
	S.	TD 0500	1	373	3585	26	92	001	286	9 0	831		125									
		ID 0600		186	3565	27	714	001	088	0 0	950	15	076									
128	0B				35604																	
		TD 0700		018	3538		724	000	1999	2 1	054		030									
128	OB:			909	35217		729						000									
		10 080		B69	3521		735		890		149		990									
		ID 0900 ID 1000		741	3518 3514		752		727		230		957									
							765	000					930									
	S			631							296											
128		TD 1100	0	541 498	3511 35094	27	174 177		510		352	14	910									

REFERENCE	SHIP	LATITU	0.5	LONGITUDE	MARSOEN	STATION	TIME YEAR		ATOR'S	DEPTH	MAX		WAVE SERVATIONS	WEA	- CLOUD			NODE
CTILY ID.	CDOE	•	1/10	LONGITUOE	10. 1.		HR.1/10		STATION NUMBER	801108	0.5	1 00	THE TERT	CAC				TATION
31138	1 DG	3514		04807 W		09 29	126 1968	E17 00	7	5000		1	2 3	X 2	6 8			0007
					W	ATER	WIND BA	AIR TE	MP. C	NO.	1	CIAL	]	, -	,		'	
					COL	R TRANS DIR	SPEED ME	TER DRY	WET C	DE DEPTHS	0.055.00	VATIONS						
					-	21	POLCE		233 7	14								
				-γ	<del></del>		1021 120	T			_		1		T			
	MESSENGE TIME	\$ ND. 1	TYPE	DEPTH (m)	7 %	s */	SIGMA-T	ANOMALY-X	M. S. O. N. S. S. S. S. S. S. S. S. S. S. S. S. S.	M. VEI	DCITY	D2 ml/	PD4=P	7074L-9	ND2+N ug + 01/1	NO3-N vg - at/t	\$1 04-51 Vp - 01/1	рН
	HR 1/10	+			+		_	+		,-			+	-		70 - 0	-	-
	1	1 1	STO	0000	2253	3620	2500	002967	4 000	0 16	302		1	I			1	
	126	4	OBS	0000	2253			002707	4 000		302							
			STO		2244		2504	002933	9 003		301							
			STO		2236		2508	002894			301							
	126	5	OBS	0024	2233	36254	2510			15	301							
			STO		2229		2512	002866	7 008		301							
	126	,	OBS	0047	2216						301							
	126	4	5T0	0050	2174 1962		2533 2606	002667	3 014		291							
	120	,	STO		1948		2609	001957	2 020		241							
	126	à	OBS	0094	1889			001957	2 020		224							
		•	ST		1878		2626	001808	3 024		222							
			STO	0125	1838	3652	2636	001720	3 029		215							
	126	5	OBS	0143	1817					15	211							
			STO		1813		2641	001676	4 033		211							
	126	,	085	0191	1788			00115			210							
			5 <b>T</b> (		1787	-	2645 2649	001653			212							
	126		OBS	0288	1768 1734	3646 36405		001640	2 050		214							
		•	STO		1712	3636	2655	001598	3 058		205							
	126	6	OBS	0385	1576						175							
			STO	0400	1566	3611	2670	001480	7 073	5 15	174							
	126	>	OBS	T0482	1469						155							
			STO	-	1431	3590	2683	001371	4 087		145							
	126	,	OBS	0581	1261	35629			•		099							
			STO		1212 0988		2703 2728	001188			085							
	126	4	OBS	T0778	0858	-		000953	0 111		982							
	120	•	STO		0839		2741	000826	4 120	_	979							
			STO		0757		2752	000732			964							
	126	<b>.</b>	085	0979	0698	35230					_							
			STD		0683	3518	2760	000654		9 14	951							
			STO		0618	3515	2767	000591	-	_	942							
			STO	1200	0561	3512	2772	000542		8 14	935							
				1 - 0 0														
			STO		0513		2776	000506			932							
	126		STO STO		0513 0473 0446	3507	2778	000506 000480		0 14	932 932 935							

																						-		<del></del>		
REFERENCE	SHIP	LATITU	۱,	101	GITUDE	- 5	MARSOEN SQUARE	STATION IGM1	TIME	YEA			RIGINA			DEPTI		MAX.	085	WAN	TIONS	WEA	CLOUR		1	NOOC
CODE NO.	COOL	•	1/10	LON	1/10	9 DOC 10	10" 1"	MO DAY			' K	NO.		UMBER		01108	MI.	OF MPL'S			PER SEA	THER		_	- 1	STATION
31138	1 06	3445		0.6	751 W	+-+-			125		۵ .	E17				5000	- 1	. 1		0	10	1			$\rightarrow$	0000
31130.	1 00 1	3447	N	04	121 #	1	13 47 WA		WINC		00		IR TEN		, 1	T	7	16	33	10 1		×1	6 3	I	- 1	0008
							COLOR	T	5.0	EEO N	A ET ER		RY	WET	VIS.	NO.	_,	SPECI BSERVA	AL							
							CODE	TRANS. DIR	L   10		(mbe)		ile	SULB	1000	OBS.	IS U	BOERVA	IIUNS							
								33			166	23	13	222	7	14										
	MESSENGE	T						1	1		1				^ n	╁				Τ	. 1					
	lims o	F NO.	CA		DEPTH (	lm1	1 °C	\$ 14.	-   1	IGMA-	т	SPECIFIC ANOMA		, 0	∆ 0 N. M	. VE	LOCK		) 2 ml/l		- a1/I	10TAL=7	NO2=N μg - σt/l	NO3-N V9 - 01/I		
	HR 1/10							+			-				10*	-				+-					1	-
	1		٠.	τ.	2000	,	2250	2640	١			00.20			200	١.,										
	125		0B:	TD	0000		2350 2350	3640 36398		487		00 30	1935	01	000		532									
	125			TD.	0010		2348	3640		487		0030	010		31		532 532									
				TD	0020		2346	3640		488		0030			062		533									
	125		OB:	-	0026		2344	36398		488			, , , ,		J U Z		533									
				Tp	0030		2342	3640		489		0030	829	0.	093		533									
			5	TD	0050	)	2333	3641		492		0030			154		533									
	125		OB:	S	0051	1	2333	36406	, 2	492						15	533	2								
			S	ΤD	0079		1910	3635	2	604		0020	0007	0	217	15	522	5								
	125		OB:		007		1888	36346	. 2	610						15	521	9								
				TD	0100		1783	3635		636		0017	1068	0	264		519									
	125		OB:		0102		1776	36346		638							519									
				10	0125		1759	3636		643		0016			306		519									
	105		_	TD	0150		1742	3636		647		0016	177	0	347		518									
	125		OB	S TD	0154		1739	36362		648		0015	7/0	0			518									
	125		0B:	-	0205		1714 1710	3635 36343		653		0015	168	0.	426		518									
	127			o TD	0250		1664	3626		658		0015	440	0.0	504		518 518									
			_	TD	0300		1604	3616		665		0014			580		517									
	125		OB:	-	0301		1595	36141		665			, , , -	0.	,,,,		516									
			s.	TD	0400		1457	3592		679		0013	827	0.	724		513									
	125		083	5	T0411	1	1441	35891	2	681							513									
			S	TD	0500		1323	3570	2	691		0012	942	0.6	958	15	510	7								
	125		OB:		T0520		1290	35666		695						-	509									
				TD	0600		1128	3551	2	714		0010	809	0,	977	1 5	505	5								
	125		OB:		0622		1087	05.4	_									_								
				TD	0700		0955	3536		733		0009		_	76		00									
	125		0B	TD.	0800 T0833		0810 0769	3524		747		0007	718	1	160		496									
	125			D TD	0900		0701	35205 3517		750		0006	712				495									
				ΓD	1000		0613	3512		757		0006 0005			232 295		494 492									
	125		OB:	-	1051		0574	35102		769		000)	733	1 4	270		+72 491									
	467			TD	1100		0559	3508		769		0005	591	1 .	353		491									
				TD	1200		0528	3505		770		0005			409	_	492									
				ΤĎ	1300		0497	3502		772		0005			463	_	192									
			51	T D	1400	)	0466	3500		774		0005			16		92									
				T D	1500		0435	3498		775		0005	064		68		93									
	125		OBS	5	T1607	7	0402	34976	2	779						14	93	6								

REFER	ENCE	SHIP					. =	MAR	DEN	STATION				ORIGIN	ATOR"	5		DEPTH	MAX			VAVE		WEA-	CLOU			,	ODC	
CODE	10. NO.	CODE	LATITU		LON		PRIC	sou		IGMT		YEAR	CRUI		STATIO		١,	TO MOTTOM	OF		OBSEI			THER	COD				ROITA	
$\vdash$ $+$		<del>                                     </del>		1/10	-	1/10	-	10*			HR,1/10		+	1	NUMBE	K	+		2.Wbf.	1	_	$\overline{}$	ER SEA	-	T+PE A	_				1
1 313	1381	DG [	3503	N	04	819 W		113			128	1968	E1	7 00			15	000	16	2	5 (	)  2		X2	6 8	3		(	0009	l
									WA		WIND	BAR			MP. °C	VI		NO. 085.	SPE	CIAL										
									COLOR	IRANS. DIR	OA FORC			DRY	BUL		DE	DEPTHS	OBSERV	/ A TIO	NS									
										25	+	` -	-	233	20	5 7	+	14			$\neg$									
										123	310	1 1 5	2	233			_	1 4			-		- 1			-	т			_
		MESSENGR TIME	CAST	CA		DEPTH (	im)	1	°c	5 %.	SIG	MA-T	SPEC	FIC VOLU	IME	≨ ∆ DYN.	Μ.	sou		02	w1/1		4-P	TOTA L-P	NO2-1		03-N	$Sl \odot_d - Sl$	pH	Š
l		HR 1/10	NO.	14	rt.			1								X 10	3	VELO	CIIT			> Q ·	et/I	ыр = 01/I	hð - al	) Pe	0 - 01/1	ا/اه - وبر		c
		'		S	TD	0000	)	2	340	3638	24	88	0.0	3080	0 (	000	0	153	325			•								
		128	3	OB	S	0000		-	340	36378		88						153												
				_	TD	0010			339	3638		88		3082		003	_	153												
					TD	0020		_	338	3637		88	0.0	3086	0 (	006	2	153	_											
		128	3	ОВ		0024			337	36370		88			_		_	153												
					TD	0030			260	3636		10	00	2884	2 (	009	2	153												
		128	5	ОВ		0041		_	065	36350		63	0.0	2202		014	1	152												
		120	,	OB.	TD	0050			931 852	3635 36357		73	00	2293		0 1 4	3	152 152												
		128	,		S TD	007	-		836	3635		23	0.0	1821	2 (	019	5	152												
		128	ı	OB	_	0094		_	777	36345		38	00	1021	_	01/	_	151												
		120	,		Tp	0100			774	3636		39	00	1675	4	023	8	151	-											
					TD	0125			761	3640		46		1624		028		151												
		128	3	οВ		0143			750	36416		50						151												
				5	TD	0150	)	1	746	3641	26	50	00	1590	7	032	0	151	191											
		128	1	OB		T0190	)	1	717	36365	26	54						151	88											
					TD	0200		_	708	3635		55		1563		039		151												
				_	TD	0250			561	3627		60	00	1529	9 1	047	6	151												
		128	3	OB:		0292			516	36191		64			_		_	151												
					TD	0300			507	3617		65	00	1496	9 (	)55	2	151												
		128	3	OB.	S TD	T0398			480 476	35946 3594		76 77	0.0	1408		069	7	151 151												
		128		0B	_	T0496			310	35681		92	00	1400	0	009	,	151												
		120			TD	0500			306	3567		92	0.0	1281	9 (	083	2	151												
					TD	0600			189	3552		03		1189		095		150												
		128	1	OB		0600			189	35519		03			-		-	150												
					TD	0700			001	3538		27	00	0969	3	106	3	150	24											
				S	ΤD	080	)	0	843	3527	27	44	00	0802	9	115	2	149	981											
		128	l .	OB	S	T0806	5	0	834	35259	27	44						149	78											
				5	T D	0900	)	0	718	3517	27	55	00	0696	9	122	7	149	948											
					TD	1000			515	3509		63	00	0618	2	129	2	149												
		128	3	08		1020			597	35074		64					_	149												
					TD	1100			570	3506		66		0590		135		149												
					TD	1200			536	3504		68		0570		141		149												
				_	TD	1300			502	3502		71		0549		146		149												
					TD	1400			468	3500		73		0527		152		149												
		128	1	OB	TD S	1500 1555			434 415	3498 34967		75	00	0506	U	157	2	149												
ı		128	•	OB.	3	100;	)	U.	+17	34761	21	11						145	755											

EFERENCE IN ID.	SHIP	LATITUI	DE L	ONGITUDE 1/10	MARS SOU	ARE	STATION TO		YEAR	CRUISE NO.	5	ATOR'S TATION NUMBER		DEPTH TO BOTTOM	DEPTH OF S'MPL			VE TIONS	WEA- THER CODE	CLOUD CODES			NODC STATION NUMBER
311381	DG	3507		4808 W	113	1			968	E17	01	0		4000	16	35	3	3	X.1	6 5			0010
,,,,,,,			-			WA		IND	BAR			WP. C	Τ΄	NO.	1		-	- 1	1	, -,-		,	
						COLOR		SPEED	MET	ER _ (	YAC	WET	COD	280		CIAL /ATIONS							
						CODE	1m)	FORCE	(mbi		ULB	BULB	-										
							33	518	21	3 2	22	183	┸	14	L		Ļ			,		,	-
	MESSENGE TIME HR 1/10		CARD TYPE	DEPTH (m)	ī	ς	s ·4.	SIGM	A-1	SPECIFIC	VOLU	Μ.Ε	Δ D YN. M x 10 <sup>3</sup>	. SO:	UNO OCITY	0 2 ml/		04-P - a1/I	101AL-P yg = 01/1	NO2~N µg - al/l	NO3-N pg - at/l	NO - 0	
[														1	i							Ì	1
			STD	0000		255	3626	250		002	929	5 0	000		303								
	128	3	OBS	0000		255	36262	250							303								
			SID	0010		254	3626	250		002			029		304								
	120		STD	0020		253	3626	250		002	932	/ 0	059		306								
	128	,	OBS STD	0023 0030		253 155	36262 3637	250 254		002	594	<b>B</b> 0	086		306 283								
	128		085	0030		973	36524	260		002	J74	6 U	080	-	240								
	120	,	STD	0050		954	3652	260		001	977	4 ∩	132		235								
	128	3	085	0071		853	36500	263							210								
		•	STD		_	844	3650	263		001	731	6 0	178		208								
	128	t	085	0094		808	36484	264		-					200								
			STp	0100	1	804	3648	264	1	001	659	3 0	221	15	200								
			STO	0125	1	789	3647	264	. 4	001	639	7 0	262	15	200								
	128	3	OBS	0143		780	36465	264	6						200								
			STD	_		778	3646	264		001	629	6 0	303		201								
	128	3	085	0191	-	762	36453	265							203								
			STO			759	3645	265		001			384		203								
			STD			733	3641	265		001	594	3 0	464		203								
	128	5	OBS	0288 0300	_	700 682	36346 3631	265 265		001	E 4 E	2 0	543		199 195								
	128		085	T0388		556	36065	266		001	202	5 0	243		168								
	120	,	STO			541	3604	267		001	476	5 n	695		165								
	128	ł	OBS	T0491	_	418	35852	268					0,,		139								
			STD			406	3583	268		001	369	8 0	837		136								
	128	3	OBS	0597	1	257	35603	269							100								
			STD	0600	1	249	3559	269	7	001	253	5 0	968	15	097								
			STD		-	009	3530	271		001		_	083		026								
			STD			821	3511	273		000	884	5 1	180		970								
	128	3	085	0813		800	35090	273							964								
			STO			702	3508	275		000			261		941								
			STD			606	3506	276		000	627	3 1	329		919								
	128	5	085	1028		583	35059	276		000	E 0 2		200		914								
			STD			561	3505	276		000		_	390		917								
			STD			530 499	3504 3502	276		000			447		921 925								
			STE			499 468	3502	277	_	000		_	502 555	_	929								
			STE			438	3500	277		000			606		933								

	SHIP		- f	). #	MARSDEN	MOITATZ	TIAAS			DIC IAC	T-m att			_								
TRY ID.	CODE	LATITE	-	LONGITUDE	SQUARE	IGM		EAR	CRUISE	RIGINA	ATION'S	DEPTH	DEPTH	0.0	WAVE	B 1 C	WEA		0	T	NO	DC.
+	+		1/10	1/10 3	10' 1'	MD DAY	H2,1/10		NO.		UMBER	BOTTOM	S"MPL"		HGT PEAT		THER				STAT	TION
311381	l DG [	3450	N	04759 W	113 47	10 03	128 19	968	E17	011		5000	15	02			X 1		-		-	-
					-	ATER	WIND	BARD	1 41	R TEM		TNO	-		12 12 1		N.I.	1.6.7	* 1		0.0	11
					COLO	R TRANS. DIR		METER	DR		WET CO	200	DBSERV	LIAL ATIONS								
					-		FORCE	(mb)	-	-+-	BULB	-										
	MESSENCE				<del></del>	01	508	264	21	7	172 7	14										
	MESSENGE TIME OF	CAST NO.	CARD	DEPTH (m)	1 10	5 %.	SIGMA	-1	SPECIFIC 1			Sou	ND		PO4=1	7	TA1-8	NO <sub>2</sub> =N				
	HR 1/10								ANOMAL	Y-X10	x 10 <sup>3</sup>	VELD.	CITY	D2 ml/	19 - 01		g a1/1					pH
i	1														-			-				
	128		STI OBS		2340	3633	2484		0031	175	0000	153	25							i		
	120		510	0000	2340	36326	2484					153	25									
			ST		2340	3634	2485		0031	102	0031	153	26									
	128		OBS		2339	3635	2486		0031	059	0062	153	28									
	120		510	0025	2339	36354	2487					153	29									
			ST		2254	3635	2511		0058.		0092	153	09									
	128		OBS	0051	1987	3634	2584		00219	903	0143	152	42									
			STE		1977 1825	36337	2586					152										
	128		OBS	0076	1820	3636	2627		00178	376	0193											
			STO		1749	36362 3635	2628		2011			151										
	128		OBS	0102	1745	36347	2645 2646		00162	242	0235											
			STD		1742	3636	2647	,				151										
			STD		1739	3637	2648		00161		0276											
	128		OBS	0152	1739	36367	2649		00160	00	0316											
			STD	0200	1686	3628	2655	-	0156	2.2	0395	151										
	128		OBS	T0204	1682	36275	2655		01)6	) ) 2	0395	151										
			STD	0250	1633	3620	2661	(	0151	7/	0472	151 151										
			SID	0300	1572	3611	2668		0146		0547	151										
	128		OBS	0305	1566	36097	2669				0347	151										
	1.00		STD	0400	1429	3587	2681	C	0136	01	0688	151										
	128		OBS	0406	1421	35852	2682			-		1512										
	120		STD	0500	1302	3568	2693	0	0126	66	0819	1510										
	128		OBS	0508	1288	35655	2694					1500										
	128		STD	0600	1076	3536	2712	0	0109	51	0937	1503										
	120		OBS	0609	1058	35335	2713					1502										
			STD	0700 0800	0906	3522	2730		0092		1038	1498										
	128		OBS	T0811	0773	3513	2744	0	0079	42	1124	1495	2									
	120		STD	0900	0761 0691	35126	2745	_				1494										
			STD	1000	0621	3512	2755		0069		1198	1493	17									
	128		DBS	1015	0611	3510 35099	2763	0	0061	95	1264	1492										
			STD	1100	0560	35099	2764	_	006-			1492										
			STD	1200	0509	3506	2769		0056		1323	1491										
			STD	1300	0468	3504	2773 2777		0051		1377	1491										
			STD	1400	0435	3501	2778		00480 00474		1427	1491										
			STD	1500	0413	3498	2778		00476		1475 1523	1491 1492										
	128																					

TRY IO.	SHIP	LATITU	DE LO	NGITUOE 1/10	MARSOE SQUARE		STATION TI (GMT)		EAR	ORIGE CRUISE NO.	STATE MUN	ON		OEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'	085	WAVE RVATION HGT PER	- 00	ER	CLOUD CODES		5	NODC STATION STATION STATION
31138	1 06	3504	N 04	816 W	113 5	8	10 04 1	27 1	968	E17 0	12			5000	14	10	0 2	×	1	6 5		j	0012
						WAT	R W	IND	BARC	)•	EMP.	°C ,	VIS.	NO.	SPE	CIAL							
						LOR	TRANS. OIR.	SPEED OR FORCE	AA ETE (mba		80	EY C	ODE	OBS. OEPTHS		ATIONS							
					F	-	05	508	22	-	+-	57	7	14									
						1	107	500	1		1-1		-	1			-	1	1				
	MESSENGE	9 NO.	CARD TYPE	DEPTH (m)	T *C		s •/	SIGM	A ←T	ANDMALY-		₹ △ DYN,	. M.	. ASTO		02 ml/l	PO4-P	10TAL		NO3-N	NO3-N	\$1 O4-\$1	
	HR 1/10	1	-					-				x 1	10,				1	+	+		pg - 001	70	-
		i i	6.7.	0000		_		-	_	00007	- 1			1					1				
	127	,	STD 085	0000 00 <b>0</b> 0	233 233		3636 36355	248		003074	+3	000	00	153									
	12	′	SID	0010	233		3635	248 248		003079	37	003	2 1	153 153									
			STD	0020	233		3635	248		003084		006		153									
	127	7	OBS	0024	233		36351	248		00 300	• •	000		153									
			STD	0030	233		3635	248		003089	91	009	92										
	12	7	OBS	0048	233	12	36351	248	8					153	331								
			STO	0050	228	14	3635	250	2	002969	50	019	53	151	319								
	12	7	OBS	0071	192		36327	260	-					152									
		_	STO	0075	190		3633	260		00199	56	02	15										
	12	/	OBS	0096	181		36339	262		00174	• 0	0.7		152									
			STD	0100 0125	180 176		3634 3635	263 264		00176		026											
	12	7	OBS	0142	173		36351	264		00100	00	030	05	151 151									
	12	•	STD	0150	172	-	3635	265	-	001594	4.7	034	46										
	12	7	OBS	TO188	169		36323	265		001),	• •	0 5		15									
			STD	0200	168	7	3631	265		00154	37	042	24	15									
			STO	0250	164	7	3624	266	1	001519	99	050	01	151	175								
	127	7	OBS	0278	162		36192	266	3					151	172								
			STO	0300	159		3615	266		00149	36	05	76										
	12	7	085	T0366	152		36018	267	_					15									
		-	STO	0400	148		3594	267		00142	57	0.72	22										
	12	r	OBS STO	T0457 0500	140 134	-	35809 35 <b>7</b> 3	268 268		00130	. 7	089	e 0	151 151									
	12	7	085	0546	126		35635	269		001300	5 /	00:	54	150									
	12	,	SID	0600	114		3548	270		001130	16	098	e o										
			STD	0700	095		3528	272		00095		108											
	12	7	085	T0730	090	_	35232	273				•		149									
			510	0800	081	. 5	3520	274	_	00080	91	11	73										
			SID	0900	0.70	6	3516	275	6	000686	51	124	48	149	943								
	12	7	085	0922	068		35154	275							938								
			STD	1000	061		3512	276		000594		13			923								
			STO	1100	054	_	3509	277	_	000526	-	136		_									
			510	1200	048		3505	277		00049		14		_									
			STD	1300	044		3502	277		000474		146											
	10	,	STD	1400	042		3499	277		00048	12	15	15	149									
	12	r	085	T1418	042	. /	34988	277	f					149	115								

CTEY	10,	SHIP	LATITU	OE	LONGITUOE	DRUFT	SOU		\$1.4	IGMT		YEAR	CI	ORIGIN	STAT		4	CEPTH TO	MAX. OEPTH	01		A VE VA TIC	) NS	WEA-	CC	OUO		s	NODC TATION
CODE	NO.	0001	•	1/10	1/10		10*	1.	MO	OAY	IR,1/10		1	NO.	NUM	BER		80110 M	S'MPL"	D OR	нс	T PER	26/	CODE	TYPE	AW	1		UMBER
31	1381	DG	3500	N	04800 W		113	58	10	04	188	1968	E	17 01	3			4300	41	03	0	2		X1	6	5			0013
							. [	WA	TER	$T_{-}$	NINO	BAR	٥.	AR TE	MP.	7		NO.		CIAL	7							,	
								COLOR	TRAN	r DIR	SPEEC OIL FOILC	MET	ER	ORY BULB	BU.		CODE	OBS. DEPTHS	OBSERV										
							Ì			05	508	22	4	228	1	78	7	06											
		MESSENGE TIME HR 1/10	및 NO.	CAR TYP		(m)	7	τ		s ·4.	SIG	T-AM		ECHIC VOL		OYN	1. M		UNO	0 2 ml/		PO 4=		TOTAL-F #0 - 01/1	NO2		NO3-N µg - at/l	\$1 O4-\$1	
		188		000	100	^		340	1	067	1 27	1						1	044										
		100	•	0B5				369 361	_	957 95		81 81	0	00470	7				966 982										
		188	9	089	236	8	0:	332	34	921	27	81						15	032										
				S1				318	_	91	_	82	0	00475	3			_	048										
		188	3	089				286		882		83							094										
				51				273	34	88	27	84	0	00459	0			15	115										
		188		OBS				251																					
		188	3	OBS				231	-	890		88							266										
				S 1				230	-	89	_	88	0	00435	7				271										
		188	3	083	5 T406	7	0;	227	34	890	27	88						15	282										

REFERENCE	HIP	LATITUI	DE	100	GITUDE	DC1#	MARS	OEN	STATIO	N TIN		E AR			ATOR'S		OEPT	DEF	тн		VAVE		WEA-	CLOUG		,	NOOC TATION
TRY IO. CO	DE	•	1/10	LON	11/10		10*	. 1	MO OA				CRUIS		STATION NUMBER		BOTTO				G PER S		COOE	TYPE AM	-		UMBER
+		2500	-	-	-	1						040		+-		-							v 1		·		001/
311381  D	G	3508	N	04	820 W	1 1	113		10  05	_	1-	968	E1	7 01		, 1	500	0 1	٠ ا د	14	2	- 1	X 1	6 3	1	Į.	0014
								WAT	_	Wi	SPEED	BARC		AIR TE		VIS.	NO. 085	s	PECIAL								
								COLOR	TRANS.	DIR.	OR	METE (mbs		DRY BULB	BULB	COD	OBS.	1280 Z	RVATIO	SMC							
									1		508	21		222	183	+	14	+		_							
									1.	. 0 1	300	21	'   '	222	_	1	1		_				r			1	-
MES	SENGR		CAF		OEPTH	(m.)	r	*C	5 .,	٠. ا	SIGMA	4-1	SPECIF	ic voli	ME D	YN. M		DUND	02	ml/l	PO 4-P		A L - P	NO2-N	NO3-N		рн
	1/10	NO.	TYP	'E									ANU	MALY-I	.	x 10 <sup>3</sup>	VI	ELOCITY			μg - e1/1	ъĝ	- 01/1	υg - α1/I	νg = αl/l	νg - α1/ί	
'		' '	51	τo ˈ	000	0	2:	358	3632	. '	247	8 '	00	3175	7 0	000	11	5329	1		•	,				,	
	125		083	5	000	0	2	358	3631		247							5329									
			51	T D	001	0	2	357	3632	•	247	9	00	3173	8 0	032	1	5331									
			S.	TD	002	0	2	357	3632	2	247	9	00	3173	0 0	063		5332									
	125		OB:	S	002	6	2	356	3632	7	248	0					1	5333									
			S	T D	003	0	2	351	3632	2	248	1	00	3164	2 0	095	1	5332									
			\$		005			325	3632		248	8	00	3100	7 0	158	1	5329									
	125		OB:		005	_		324	3631		248							5329									
			5		007			922	3635		260		00	2030	3 0	222		5228									
	125		OBS		007			911	3635		260							5225									
			S		010		_	798	3634		263		00	1744	4 0	269	_	5197									
	125		OB:		010			798	3634		263				_			5197									
			_	D	012		_	765	3636		264			1660		312	_	5192									
				D	015			741	3638		264		00	1598	0 0	352	_	5189									
	125		OB S		015		_	739	3638		265				_			5189									
	1 2 5			T D	020			717	3636		265		00	1576	5 0	432		5190									
	125		OBS		020 025			716 692	3639		265		00	1401		E 1 1	_	5190									
				TD TD	030			647	3627 3618		265 265	_		1601 1578		511 591	-	5189									
	125		OB:		030			646	3618		265		00.	1510	2 0	> ~ 1		5183 5183									
	12)			ΤD	040			490	3597		267		00	1416	7 0	740		5148									
	125		OB:		1040			484	3599		267		00	1410	. 0	740		5147									
	11,			TD	050			337	3573		269		00	1303	5 0	876		5112									
	125		08	_	1050			337	3572		269		• •		, ,	0,0		5112									
	125		08		059			163	3548		270							5066									
				Tn	060			159	3548		270		0.0	1160	6 1	000		5065									
			Š.	T D	070			964	3531	l	272			0956		106		5010									
	125		OB!		1079			814	3519		274							4968									
			S.	T D	080	0	0	811	3520	)	274	3	000	0805	6 1	194		4968									
			s'	TD	090	0	0	710	3516	5	275	5	000	0691	4 1	268	1	4945									
			S.	TD	100	0	0	625	3513	3	276	4	000	0605	5 1	333	1	4927									
	125		OB:	S	100	2	0	623	3512	26	276	4					1	4927									
				TD	110			553	3510		277			0536		390	1	4915									
			-	TO	120			497	3507		277			0493		442		4908									
				TD	130			455	3504		277			0469		490		4907									
				TD	140			427	3501		277			0463	_	537		4912									
				TD	150			414	3499		277		000	0470	7 1	583		4923									
	125		OB:	5	T153	5	0	413	3498	34	277	8					1	4929									

	TITUDE	LONGITUDE LE	MARSDEN	STATION		ORIGIN	A TOR'S	DEPTH	MAX.		WAV	Ε.	WEA-	CLOUD		-	
NO. CODE	1/10	1/10	10" 1"	MO DAY	160	CKOIZE 2	TATION	BOTTOM	OF S'MPL"	1	Daserval	ions	THER	CODEZ			TATION
.381 DG   34	57 N (	04802 W	113 48	10 06	126 196	8 E17 019	5	4000		-	-	ER SEA	-	I TPE AM	1		AUWBER
				ATER	WIND	RO. AIR TEN		1	15	31	2 2 2		X 1	3 3			0015
			COLO		SPEED M	ETER DRY	WEI COD	NO. OBS.	SPEC OBSERV	SIAL							
				-	FORCE (	nba) BULB	BULB	DEPTHS	003684	A 11014	3						
				18	S14 1	96   233	200 7	14			7						
MESSENGR CA TIME OF N HR 1/10	O. TYPE	OEPTH (m)	2.1	5 %.	SIGMA-F	SPECIFIC VOLUM	X	SOUN		02 m			DTA L - P	NO2=N ug - ot. i	NO3=N µg - al/l	SI 04-51	рН
							1	-		_	-	-			pg - ar/1	µg - q1/1	
	STO	0000	2319	3628	2487	00 30 9 2 3	0000	350				1	ľ	- 1			
126	085	0000	2319	36280	2487	00 30 42 3	0000	153									
	STO	0010	2319	3628	2487	0030930	0031	153									
	STO	0020	2318	3629	2488	00 30 9 3 7		153. 153.									
126	085	0025	2318	36287	2488	30 30 731	0002	153									
	STD		2312	3629	2490	0030780	0093	153									
126	OBS	0048	2290	36295	2496	- 20 . 00	00,5	153									
124	STD	0050	2239	3631	2512	0028709	0152	1530									
126	085	0073	1844	36434	2628			1520									
126	570	0075	1840	3643	2628	0017727	0210	1520									
126	OBS	0097	1798	36418	2638			1519									
	STD	0100	1795	3642	2639	0016829	0253	1519									
126	STD	0125	1772	3641	2644	0016402	0295	1519	94								
126	OBS	0146	1758	36410	2647			1519									
126	STD OBS	0150	1757	3641	2647	0016164	0336	1519									
120	STO	10195	1740	36398	2651			1519	76								
	STD	0200 0250	1735	3639	2651	0015966	0416	1519	95								
126	085		1685	3630	2656	0015629	0495	1518	81								
120	STD	0294 0300	1641	36228	2661			1518	11								
126	085	T0396	1636 1536	3622	2662	0015257	0572	1518	0								
	STO	0400	1531	36058	2672			1516	3								
126	OBS	10494	1403	3605 35828	2673	0014474	0721	1516									
	STD	0500	1393	3581	2684 2685	00125		1513									
126	OBS	0588	1245	35599	2698	0013573	0861	1513									
	STD	0600	1217	3557	2702	0012057	0000	1509									
	STD	0700	1010	3537	2724	0012057	0989	1508									
126	085	T0778	0883	35256	2737	0007724	1099	1502									
	STD	0800	0860	3525	2740	0008452	1191	1499									
	STO	0900	0763	3521	2751	0007370	1270	1498 1496									
126	085	0989	0686	35177	2760	- 201510	1210	1496									
	STD	1000	0677	3517	2761	0006506	1340	1495									
	STD	1100	0603	3514	2768	0005780	1401	1493	-								
	STO	1200	0540	3510	2773	0005304	1456	1492									
	STD	1300	0489	3507	2776	0004933	1508	1492									
	STD	1400	0449	3503	2778	0004787	1556	1492									
126	STD OBS	1500	0421	3500	2779	0004728	1604	1492									
		T1515	0418	34996	2779												

REFERENCE CTAY ID. CODE ND.	SHIP	LATITUD	E LE	PNGITUDE 1/10	MAR SQU	ARE		M TIA		YEAR	CRUISE NO.		ATOR'S TATION IUMBER		DEPTH TO BOTTO		PTH.	OBSE	VAVE RVATIDN	 WEA- THER CDDE	CLOUD CDDES	ī		NODC STATION NUMBER	
311381	06	3500	N 04	4804 W	113	58	10 0	7 1	24 1	968	E17	010	5		3400	0 1	6	34 2	2 2	X1	3 2			0016	
						WAT	E R		ND	BARC	1	IR TEA	AP. ℃	]	NO.	7	SPECIA			•					
						COLOR	(40)	DiR.	SPEED OR FORCE	METE (mbs	R (	ORY ULB	WE1 BULB	COD	DEPTH	mest	ERVATI								
								36	514	21:	3 2.	28	189	7	14					 					_
	MESSENGE TIME HR 1/10	NO.	CARD TYPE	DEPTH (m)	,	°C	5.	۸۰۰	SIGM	A – T	SPECIFIC ANOM		, E C	E △ D YN. M x 10 <sup>3</sup>	\. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	LOCITY	. 0:	m1/1	PO4-P pg - 61/	01At-P	NO2-N pg - al/1	NO3-N µg - al/l	\$1 O4=5 #9 - 01/		
															-					- 1					
	'		STD	0000	2	319	362	8	248	7	00 30	092	3 0	000	15	5319	)								
	124		OBS	0000	2	319	362	30	248	7					15	5319	•								
			SID	0010	2	319	362		248		003			031		5321									
			STD	0020	_	318	362		248		003	093	2 0	062		5322									
	124	•	OBS	0027	_	318	362		248							53 <b>2</b> 3									
			STO	0030		310	362		249		003			093		5322									
			STO	0050	_	253	363		250		002	912	2 0	152		5311									
	124	•	OBS	0053	_	245	363		251							5310									
			STO	0075	_	934	364		260		002	023	7 0	214		5232									
	124	•	OBS	0800	_	888	364		261		001					5220									
			STD	0100		814	364		263		001	738.	2 0	261		5202									
	124	•	085	0106	_	797	364	-	263		001					5198									
			STD	0125	_	782	364		264	_	001			304		5197									
	1.0		STD	0150		766	364		264		001	023	1 (.	345		5197									
	124	•	OBS	0161	_	760 748	364 364		264 265		001	E07		425		5197 5 <b>20</b> 0									
	124		STD OBS	0200 0214	_	741	364		265		001	3 <del>7</del> 1	9 (	425		5200									
	12.	•	STD	0214	_	707	363		265		001	584		505		5195									
			STD	0300	_	656	362		265		001			583		5186									
	124		OBS	0322	_	633	361		266		001	,,,,,,	, ,	,,,,		5182									
	12-	•	STD	0400	_	550	360		266		001	496	2 (	736		5168									
	124		085	0431		510	359		267		001	.,.,				5160									
		•	STD	0500		406	358		268		001	391	5 0	880		5136									
	124		OBS	T0535	_	350	357		268					-		5122									
			STD	0600		234	355		269		001	246	0 1	012		5092									
	124	•	OBS	0650	1	146	354	56	270	6					19	5068	}								
			STD	0700	1	051	354	D	271	9	001	043	5 1	127	1 1 9	5042									
			STD	0800	0	880	352	9	274	0	000	848	9 1	221	. 14	4995	•								
	124	•	085	T0879	0	764	352	12	275	1					14	4963	}								
			STO	0900	0	737	351	9	275	4	000	711	3 1	299	14	4956	)								
			STO	1000	0	620	351	2	276	4	000	603	4 1	365	14	4925	•								
	124	•	OBS	1091	0	533	350	63	277	1					14	4905	•								
			STO	1100		531	350		277		000			422		4905									
			STO	1200		505	350		277		000		_	474		4911									
			570	1300		479	350		277		000		_	525		4917									
			STD	1400	-	454	350		277		000			575		4924									
			STD	1500		428	350.		278		000	466	1 1	622		4930									
	124	•	OBS	1644	0	391	350	98	278	2					14	4938	5								

REFERENCE	SHIP			LONGITUOE	# MA	SOEN			TIME		1 0	RIGINAT	OR'S		OEPTH	MAX		WAV			WEA	T	LOU			
787 10.	COOF	LATITU				JARE		(GM)	r)	YEAR	CRUISE	STA	TION	-	10	DEPTH	1 0	SERVA		s	THER		COOE			NOOC
7			1/10	1/10	10*	1.	MO	DAY	HR.1/10		NO.	NU	MBER		MOTTOR	S"MPL	S DR.	HGTP	ER 1	SEA	CODE	7.7	PE A	AT		NUMBER
31138	1 DG	3506	ON	048170W	1113	,		0.8	125	1968		017			5000	03	32	1 2			×1	1	3 2			0017
						WA	_	+-	WIND	BAR	V	IR TEAAP		VIS.	NO.	SPE	CIAL									
						COLOR	TRANS	OIR	FORC	1			W ET	CODE	OBS. DEPTHS		ATIONS									
							<u> </u>	28	_	` -	_+_		67	7	08	_										
	MESSENC	CAST	CARC				1	1	T				T	Δ 0	<del></del>			-		_				т	_	
	HR 1/1	9 NO.	TYPE		'	°C	5	•/	SIG	MA-T	ANOMA	VOLUME	DAI	N. M. 10 <sup>3</sup>		UND	0 2 ml/		4~P - 61/I	_	TA L — P g + o1/1		02-N - al/l	NO3-N		
		<b>*</b>			_		+-	-				_	X	100	+		_			-	4 - 0.71	20	- 01/1	µg - 01/	ום - פע	71
	1	3	STI	0000	۱ ,	300	36	3 2	24	0.5	0030	1100	00	00	15	315		1		1						İ
	12	5	085	0000		300		320	24		0000	103	00	00		315										
			ST	0010	2	299	36		24		0030	112	0.0	30	15											
			ST	0020	2	299	36	32	24		0030			60		318										
	12	5	OBS	0026	2	298								•												
			ST		2	265	363	33	25	06	0029	231	00	90	153	311										
			ST		2	092	363	33	25	55	0024	668	01	44	152											
	12	5	085	0051		083	363		25						152	268										
			ST			841	364		26	27	0017	896	01	97	152	206										
	12	•	085	0078		822	364		26						152	201										
	12		STO		_	771	364		26		0016	321	02	40	151	190										
	12	,	OBS ST	0103	_	766	364		26						151											
			STE			763	364	_	26		0016		02		151											
	125		085	0156		756 754	364	_	26		0016	090	03	21	151											
	12.		510			733	364	_	26		0014				151											
	125	5	085	T0209		127	363 363		26 26		0016	064	04	01	151											
			STE			697	363		26		0015	006	٠,		151											
			STD			548	362		26		0015	-	0.4		151	-										
	125		OBS	0310		537	362		20.	, ,	0019	ノムタ	05	οU	151											

	SHIP	LATITU	OF .	LONG	SITUOE	P C		RSO UAR		310	ION T	IME	YE.	AR	CRUISE		ATOR'S		DEP		MAX. DEPTH	OBS	WAV ERVA			WEA-	CLOUD			STATION
Y IO.	CODE	•	1/10		17/1		10*		10	MO [1	JAY F	4R.1/10	1		NO.	,	SAMUE	8	8011		S'MPL'S	DIR	HGT I	E# 58	A	CODE	TYPE A M	1		NUMBER
11381	1 06	3502	N	048	12 W	,	11	3 1	58	10 0	9	131	19	68	E17	01	R		280	0	15	20	3 2	,		X1	6 4			0018
	1,00,1	3302		0.0		'	1	بار	WAT		$\rightarrow$	WIND		BARC			MP. °C	$\top$	N/C				15 14	• •	•				'	
									OLOR		OIR.	SPEE	٥ .	METE	R C	3RY	WET			5.	SPECI DRSERVA									
								-	300	IW.)		FOR	ÇE	(mbs		ULB	BULE	+-	+-											
							<del></del>	_		-	21	518	3	081	2.	28	200	_	14				_							
	MESSENG VIMI	CAST	CAR		DEPTH	(m.)		1 .	c	5	٠/	SIG	SMA-	- 1	SPECIFIC		ME	₹ Δ C DYN. A x 10 <sup>3</sup>	ì. l .	soui		0 2 ml/l		4-P		TAL-P	NO2-N	и03−и	SI 04	
	HR 1/10		TYP	ŧ								1_			ANUM	ALT-11	•	x 103		(ELO	CITY		94	- 01/1	20	- 61/1	µg - at/	yg - 01/1	- Qu	1/1
	1																													
			ST		000			221		363			502		002	948	0 (	0000	) ]	53	11									
	13	1	OBS		000			221			350		502							53										
			51	-	001			221		36:	-		503		002			0029		53										
			51	-	002			22		36:	-		503		002	946	1 (	0059		53										
	13	1	08.9		002			22	-		370		503		00-					53										
			51		003			22		36			504		002	937	8 (	0088		53										
	13	1	085		004			226		36			508		000					53										
			51		005			21		36:			544		002	565	5 (	0143		52										
	13	1	OBS		006			184			14		527		001	<b>3</b> 00	_			52										
			51		00			18		364			533		001	132	0 (	197		.52										
	13	1	OBS		009			17			54		542		001	/ 27				51										
			51 51		010			17. 17		364			543 547		001			239		51 51										
	13	1	OBS		013			17		-	451		548		001	011	,	280		51										
	13	1	S1		015			17		36		_	548		001	60 R	6 1	320		51										
	13	1	OBS		T018			17		_	428		549		001	000		,,,,,		51										
		•	51		020			17		36			651		001	603	1 (	040		51										
			51		025			17		36			555		001			0480		51										
	13	1	OB S	_	02			16			297		657							51										
			51		030			16		36			660		001	541	2 (	0558		51										
	13	1	083	5	03	74		15			155		668							51										
			S	ΙD	040	0		15	67	36	8	26	667		001	504	7 (	710	) ]	51	74									
	13	1	OB S	5	T04	74		14	78	35	886	26	672						1	51	56									
			51	T D	050	0		14	35	35	84	26	678		001	423	4	0857	7 ]	51	45									
	13	1	OB S	5	056	4		13.	26	35	728	2 (	692						1	51	19									
			51	FD	060	0		12	55	35	53	26	699		001	236	2	990	) !	51	.00									
			\$1		070			10		35			716		001	077	8	1106	5 ]	50	51									
	13	1	OBS		T075			09			318		725							50										
			S	-	080			09	-	35	_	_	734		000	_		1205		50										
		_	S		090			07		35.			750		000	757	0	1288		49										
	13	1	OB S		095			07			200		756				_			49										
			51		100			06		35			762		000			1358		49										
			5		110			05		35			770		000			1418		49	_									
			51		120			05	_	35			775		000			147		49										
			\$1 \$1		130			04 04		350			778 778		000			1519 1567		49										
			_	P ( )		111												י חרי												

	SHIP	LATITU	OE	LONGITUDE	14.0	MAR		STATI	ON T	IME		T	ORIGIN	ATOR'	s	DEPTH		MAX	-	w	AVE	T.	EA-	CLOUD	-	-	_
e NO.	CODE	•	1/10	11/	Dept	10*	1.			R,1/10	YEAR	CRU		STATIC		80110		EPTH OF MPL'S	0	BSER	VATION	TH	HER	CODES			NODC TATION NUMBER
1381	DG	3456	N	04759	1	113	47	10 1	0	128	1968	F 1	7 01	Q		5000				- 1	1	-	-	TYPE AMI			-
							WA	TER		ONIV	BAR	7	AIR TE		T	NO.	-	16	03	3 3	12	Х	1	3 3	Į.	-	0019
							COLOR	TRANS.	DIR,	SPEED OR FORCE	M ET	TER	DRY BULB	W.E.		200	80 8	SERV	ATION	5							
_									33	516	11	2	206	16	7	14											
- 1	ESSENG# TIME 0 R 1/10	CAST NO.	CARI		(m.)	T	*c	5		\$IG W	A A T	SPEC	FIC VOLU	M.E	₹ △ 0 0 Y N . N x 10 <sup>3</sup>	1 30	LOCIT		0 2 ml	/1	PO 4=P	TOTAL		NO2-N ug - 61/1	NO3+N ug - atri	\$1 O4=\$1	
1				_	_	1								-													-
	7 2 0		SI				273	363		250		0.0	2945	4 (	0000	15	308	8		1							
	128		OBS				273	363		250						15	308										
			ST				273	363		250			2950		029		310	Э									
	128		085	D 002 002			73	363		250		00	2955	5 (	059	15	311	1									
	120		51				73	3630		250						15	312	2									
	128		085	004			18	363		252		00	2777!	5 (	088	15	299	7									
	- 20		ST				159 136	3642		257				_			262	2									
	128		OBS	007			150	3642 3641		257		00	2256	7 (	138		256										
			ST				46	3642		262		00					208										
	128		OBS	009			108	3644		262 263		00	17944	+ (	189		207										
			ST				107	3645		263		0.0	1 ( 0 6 1				201										
			ST				94	3646		264			16882		232		201										
	128		OBS	014			83	3646		264		00.	16588	3 (	274		201										
			ST				83	3646		264		00	6385		215		202										
	128		085	T019			64	3646		265		00.	0303	, (	315		202										
			ST	020	0	17	_	3646		265		00.	6137	, ,	397		205										
			ST	025	0	17		3642		265			6034	-	371 477		205										
			STE	030	0	17		3636		265			5821		557		205 203										
	128		0B S	030	4	17	02	3635		265					221		203 202										
			ST	040	С	16	06	3618		266		001	5191	0	712	15											
	128		OBS	T041	3	15	89	3614	7	266					, 12		183										
			STO	050	)	14	52	3590	)	267		001	4159	0	858		152										
	128		085	T052	2	14	15	3584	3	268				0			143										
			STO			12	76	3564		269		001	2705	0	993	151	_										
	128		OBS	062		12		3558	2	2700	О					150											
			STO			10		3542		271	5	001	0870	1	111	150											
	120		STO	_		09		3525		2732	2	000	9300		211	150											
	128		OBS	T084		08		3520		2738				-		149	_										
			SID			07	-	3519		2748	3	000	7752	1	297	149											
	120		SID			06	_	3517		2761		000	6416	1	368	149											
	128		OBS	1062		06		3515	6	2768						149											
			STD	1100		060		3515		2769			5657		428	149	34										
			STD	1200		056	_	3512		2772	-		5463	-	484	149	935										
			STO	1300 1400		05;		3509		2774			5267	_	37	149	36										
			STD	1500		048		3506		2776			5069	-	89	149											
	128		08S	T1620		044	-	3502 3497:		2777		000	4942	1	39	149	38										
																149											

ID. E NO.	SHIP	LATITU	0E LO	NGITUDE POST	MARS SQU	ARE	STATION TO		'EAR	ORIGII CRUISE NO.	NATOR' STATIO NUMB	N	DEPTH TO BDTTOA	DEPIH	085	WAVE ERVATION HGT PER	١ ا	WEA- THER CODE	CLDUO CODES	j		NOOC STATION NUMBER
11381	DG	3459	N 04	806 W	113	48	10 11 1	29 1	968	E17 02	0		4400	16	35	2 2		x 1	3 3			0020
					[	WAT		IND	BARO	AIR TI	MP. ℃		NO.	COE	CIAL				_			
						COLOR	TRANS. DIR.	SPEED	METE	R ORY	W E		OBS.	1 Carren	ATIONS							
					-	COOE		FORCE	(mba		+		-	-								
_							02	512	196	189	15	0 7	14	<u> </u>								-
-	MESSENGI		CARD	DEPTH (m)	1 ,	°C	5 .4.	SIGM		SPECIFIC VOL		₹ ∆ D OYN, W	so	DNU	0 2 mi/t	PO4-P	101	A L-P	NO7-N	NO3-N	SI O 4 = 5	pH
	TIME HR 1/10		TYPE	Derin am	1		/ "	310 M	`-'	ANOMALY-	107	x 10 <sup>3</sup>	VEL	LOCITY	02	yg - 01/1	hā.	01/1	1/10 - وير	µg - a1/1	μg - α1/	1
Ì								1									1					
1		1	STD	0000	22	267	3627	250	1	002957	9	0000	15	306		1	1	1			1	1
	129	9	085	0000		267	36268	250		002731	_	0000		306								
	12		SID	0010		268	3628	250	_	002955	4	0030		308								
			STD	0020		269	3630	250		002947		0059		310								
	129	9	OBS	0024		269	36311	250			_		_	311								
			STD	0030		261	3634	250		002901	9	0088		310								
	12	9	OBS	0047	22	239	36416	252	0				15	308								
			SID	0050	2	175	3642	253	9	002619	95	0144	15	293								
	129	9	085	0072	18	853	36462	262	8				15	209								
			STD	0075	18	845	3646	262	9	001763	30	0198	3 15	208								
	129	9	085	0096	18	<b>B</b> O3	36449	263	9				15	199								
			STD	0100		800	3645	264		00167		0241		199								
			STD	0125	_	786	3646	264		001639	8	0283		199								
	12	9	085	0146	_	776	36461	264						199								
			STD	0150		775	3646	264		001621	0	0323		200								
	12	9	OBS	T0195		760	36472	265			_			203								
			STO	0200		759	3647	265		001594		0404		203								
	2.0	0	STD	0250		737	3641	265		001603	36	0484		204								
	12	9	OBS	0299	_	706	36341	265		001504	,	05//		202								
			STD	0300 0400		705	3634	265		001596		0564		202								
	12	2	SID			508 596	3617 36155	266		001530	8	0720		187								
	12	9	OBS SID	10409 0500	_	438	3593	266 268		001364	. 6	0865		185 148								
	12	0	0B5	10516	_	412	35890	268		001364	, ,	0000		141								
	12	7	STD	0600		289	3564	269		001296		0998		111								
	12	2	085	0620		258	35590	269		0012.76	,	0 7 7 6		104								
	1 2	,	SID	0700		94	3540	271	-	001121	7	1119		058								
			SID	0800		921	3523	272		000961		1223		009								
	12	9	OBS	T0833		872	35192	273		00070.		1223		996								
			STD	0900		794	3518	274		000807	79	1311		977								
			STD	1000		690	3517	275		000670		1385	_	954								
	12	9	OBS	1051		643	35158	276			-			943								
			STD	1100	0	602	3515	276	9	000569	92	1447	7 14	935								
			STD	1200	0	530	3512	277	6	00050	18	1501	14	922								
			STD	1300	0	475	3509	278	0	000459	95	1549	9 14	916								
			SID	1400	0.	435	3506	278	2	00043	19	1594	14	916								
			STD	1500		412	3502	278		000446	1	1638		923								
	12	9	085	T1594	0	404	34981	277	9				14	935								

Table XII.—Observed and interpolated oceanographic data for stations taken by USCGC YAKUTAT at Ocean Station ECHO, 12 October-5 November 1968, prepared from NODC listing No. 31-1383

FERENCE ID.	SHIP	LATITU •	1/10	LONGITUDE	MAR SQU	ARE	STATION (GM	TIME TI HR.1/10	YEAR	CRUISE NO.		ATOR'S TATION UMBER		DEPTH TO BOTTOA	DE	PAX. EPTH OF MPL'S	OBSE	WAVE RVATIC		WEA- THER CODE	CODE	5	NODC STATION NUMBER	ч
1383	YA	3511	N	04756 W	113	57	10 12	216	1968	E18	001			4567			04	31717	2		6 7	+		-
						WA		WIND	BAR	0- 4	IR TEM	P. 10	_	NO.	1				1 2	1 × 0	1 6 1	1	000	1
						COLOR	TRANS DI	R SPEE OR FORG	mei		JLB	W ET BULS	CODI			SPECIAL SERVATIO								
ſ							04	\$ 520	24	8 1:	39	168	8	10	T									
	MESSENGE TIME HR 1/10	S NO. I	CARD		7	°C	s ·4.	SIG	MA-1	SPECIFIC ANOM	VOLUA ALY-X10	;	△ 0 YN. M X 10 <sup>3</sup>	. SO	UND		ml/i	PO		OTA L-P	NO2-N	NO3-1		4
1			S T	0000	3.	157	2601	2.5													_		-	-
	216		085	0000			3631		35	0026	312	00	000		278									
	-10		\$ T I			157 157	36311 3631		35	000					278									
			STI			158			35	0026			026		280									
	216		085	0027		58	3631		35	0026	393	00	053		282									
			\$TI			53	36314 3635			000					283									
			STI			97	3650		39	0026			79	15.										
	216		OBS	0057		68		25		0023	562	0.1	129	15										
			ST			46	36532 3652								267									
	216		085	0087		90	36517	26		0019	667	0]	183	15										
			STO			64									223									
	216		OBS	0116		36	3651	26		0017	815	0.2	229	157										
			510			24	36509							152										
			STO			96	3650	26		0017			273	152										
	216		085	0174		78	3649 36480	26		0016	504	0.3	315	152										
			STO		17		3648			0014				152										
	216		085	T0230	17			26		0016	205	03	97	152										
			STO		17		36473	26						152										
			STO		17		3647	26		0016			78	152										
	216		085	0344	17		3644	26		0016	222	05	59	152										
			STD		16		36387	26						152										
	216		085	T0460			3627	260		0015	581	07	18	152										
	- 10		STD		15		36122							151										
			STD		15		3601	26		0014		0.8		151										
	216		OBS	T0678	13		3571	26		0012	957	10	05	151										
	210		003	10018	11	31	35439	270	) 7					150	70									

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REFERENCE	SHIP	LATITU	, l	LON	GITUDE	1.5	MARS			IDN TI GMTI	ME	YEAR			NATOR'S		DI	EPTH TO	MAX.		W.A	VE ATIONS		WEA-	CFOR				NODC
CTRY ID.	CODE		1/10	LUN	1/10	PNDCT	10*				R.1/10	15 08	CRUI		STATIO		801	****	OF S'MPL'S	1		7 E B S		CODE	TYPE			1 2	TATION IUMBER
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311383	I YA I	3458	N	048	310 W		113	48 WA		3 ]	IZ/	1968	T		MP. °C		1	80	16	0.8	٦'	1 1	2	X 1	01:	5		ſ	0002
								COLOR	T	-	SPEED	METE		DRY	WET	V15	. 0	ND. 585.	SPER VRB280	CIAL									
								CODE	Im1	DIR.	FORCE			BULB	BULE	1000	DE	PTHS	DRIENA	A IIDN	'								
							-			0.8	516	24	ī	201	15	8	T	3			1								
	MESSENGE						Г		<del>'</del>		1	1 2-	Г,		-		4				ή_		Т						T
	TIME	약 ND.	CAF		DEPTH (	m)	T	°C .	\$	٠/	SIGA	AA-T		FIC VOL	107	X 103	۸.	VELD		0.3 w/		D4-P 9-01/I		0 TAL - P	ND 2-1		D3~N 3 - 01/I	\$1 O4=\$0 yg - at/i	рН
	HR 1/10						-		+		-		_		-	X 10°	+		-		+		Η.	-		+ "	, - 0., 1		
	1	1 1									1						ļ										-		
		_	S		0000			234	363		25		00	2793	9 (	0000		152											
	127	/	083		0000			234	363		25							152											
			S1		0010			235	363		25			2800		028		153											
	127	,	OBS		0020			236 237	36: 36:		25: 25:		UU	2805	<b>D</b> (	056	)	153 153											
	12	,	Si		0030			232	363		25		0.0	2795	2 /	084		153											
			5	-	0050			292 195	363		25			2697		139		152											
	127	7	ов:		0053			189	363		25		00	2071	0 (	,15,		152											
	12	,	S		007		_	938	364		260		0.0	1968	5 (	197	,	152											
	127	7	085		0080			902	369		26		- 0		•	, ,		152											
			S		0100		_	856	369		26:		0.0	1752	0 (	244		152											
	127	7	085		010		_	845	365	_	26				•			152											
			51	T D	0129		1	822	365		264		0.0	1681	9 (	287	7	152											
			51	Oβ	0150	)	1	797	365	0	264	45	00	1645	6 (	328	3	152	07										
	127	7	083	5	0159	9	1	790	364	98	264	46						152	06										
			5		020			772	364		264		00	1618	1 (	410	)	152											
	12	7	083		T0212			767	364		26							152											
			51	_	025		-	761	364		26			1623		491		152	-										
			5.		0300			736	364		26		00	1618	1 (	)572	2	152											
	127	,	OB S		0316			724	363		26!			1600				152											
	127	,	5°		0400 T0418			622 598	36		266		υO	1533	4 (	730	)	151											
	12	'	5		0500		_	439	361 359		261		00	1381	1 /	875		151											
			S.		0600			254	356		270			1227		1006		151											
			S.		0700			294 081	354		27			1083		121		150											
			Š.	_	0800		_	919	35;	_	27			0943	- '	223		150											
	12	7	OB:		0830			972	35		27			73	_		•	149											
		-	S		0900			752	35		27		00	0763	8	308	3	149											
			s '		1000			617	350		27			0621		377		149											
	12	7	08		T1034	4		581	350	72	27							149											
			S <sup>*</sup>	TD	1100	0	0	547	350	6	27		00	0557	2	436	<b>.</b>	149											
			S.		1200		0	502	350	4	27	73	00	0521	8	490	)	149	10										
	12	7	OB S		1299			466	350		27							149	12										
			S.	_	1300		04	466	350	2	27			0498		541		149	12										
			S?		1400			438	350		27			0478		1590		149											
			Si		1500			419	349		27		00	0477	4	638	3	149											
	127		083		T1570			411	349		27							149											

NCE	SHIP	LATITU	DE	LONGITUDE	VDC10	AARSOEN SQUARE	STATION T	IME YEAR	ORIGIN CRUISE 5	ATOR'S	DEPTH	OEPT OF		WAVE SERVATIONS	WEA	CODES		51	DOOR
NO.	2000	•	1/10	1/10		0* 1*	MO DAY	1R,1/10		MUMBER	80110M	S'AAPL	S DIR	HGT PER SE	CODE	TYPE A AT	-	N	UMBER
383	YA	3504	5 N	048037W		13 58	10 14	166 196	8 E18 00	2	2688	13	10		2 X1	0 1			0003
		,,,,,,						MIND	AIR TE	MP. C	NO				£ , ^ •		,		0003
							TRANS. DIR.	SPEED M	ETER DRY	WET COS	D85.		ECIAL VATIONS						
						CODE	(m)	FORCE IF	nbsi 8ULB	8UL8	DEPTHS								
							14	505 2	23 221	177 8	14	İ							
[	MESSENGR	CAST	CARO						SPECIFIC VOLU	ME & A DYN.	, , ,	UND		PO 4-P	TOTAL-P	NO2-N		SI O4-SI	
	1100 6	4 NO.	TYPE	DEPTH	(m)	1 10	5 */	SIGMA-T	ANOMALT-E	DYN. 7 x 10 <sup>3</sup>	A. VELO	DCITY	O2 ml/	µg = 85/1	νg - ο1/1		NO <sub>3</sub> -N	102-31	р∺
ŀ	HR 1/10	-							+	* 10	+	-	-			-		-	-
		1 1						I		1	1	!				1			
			STI			2145	3627	2536	002628	4 0000		275							
	166	>	OBS	0000		2145	36271	2536	000500			275							
			510			2132	3627	2539	002598			273							
	144		511			2123	3627	2542	0025 <b>79</b>	0 0052		272							
	166	>	085	002		2121	36265	2542	00 25 23			272							
	144		STO			2121	3627	2542	002581	1 0078		273							
	166	,	085 51	004		2121 2098	36263	2542	002502	. 011		276							
	1.4		085	007			3630 36552	2551	002503	4 0129									
	166	,	5 T (			1916 1911	3655	2618 2619	001858	4 0183		228							
	166		085	00.7		1878	36546	2628	001858	4 018.		227 221							
	100	,	5TI			1871	3654	2629	001776	8 0229		221							
			STI			1833	3652	2637	001708			213							
	166		085	014		1811	36505	2641	301108	5 0211		210							
	100		511			1807	3650	2642	001669	3 0314		209							
	166	5	085	T019		1782	36485	2647	001007	5 051-		209							
		•	STE			1782	3648	2647	001638	8 039		210							
			ST			1773	3647	2648	001641			216							
	166	5	OBS	028		1758	36467	2652				218							
			STI			1754	3646	2652	001624	2 056		218							
	166	5	085	T0384		1693	36355	2659				213							
			ST			1671	3631	2661	001572	7 072		208							
			ST	050	)	1514	3600	2673	001476			173							
	166	5	085	T056	9	1388	35800	2685				141							
			ST	060	)	1312	3569	2692	001306	2 1012		120							
			ST	070	)	1084	3538	2712	001117			054							
	166	>	085	076	l	0958	35246	2723			150	017							
			510			0873	3519	2733	000910	5 1235	149	991							
			ST			0696	3508	2751	000729	7 131		938							
	166	>	035	T094		0633	35052	2757				921							
			STO			0595	3505	2762	000616	_		914							
			ST	_		0534	3506	2770	000542	9 1442		907							
	166	•	OBS	116		0504	35056	2774			-	905							
			ST	_		0488	3505	2775	000495			904							
			ST			0456	3504	2778	000470	5 1542		908							
	166	•	085	T133	7	0447	35030	2778			14	911							

FERENCE IV IO.	CODE	LATITUO	E L(	ONGITUDE NO	MAR SQU	ARE	STATION IGM		YEAR	CRUISE NO.	S	ATOR'S TATION TUMBER		DEPTH TO BOTTOM	DEPTH OF S'MPL	н	OBSER	VAVE EVATIO		WEA THER CODI	COD	ES		5	NODC TATION UMBER
1138	2 VA	3501	_	4801 W	113	+ +	10 15	139	1968	E18	00	<i>(</i> ,		2743	15	_		. 4		×1	1	5			0004
1130	) IA (	3001	N I O	4001 M	1113	WA		WIND	1	1	AIR TEA		$\top$	NO.				. 14	1	1 ^1	ייכו	<b>5</b> 1			0004
						COLOR	_	SPE		O	DRY	WEI	COD	085.	992	ECIAL VATIO									
						CODE	(m)	FOR		s) 8	UL8	BULB		DEPTHS											
							30	5 51	6 19	7 2	12	182	7	14			1								
	MESSENGR TIME O	CAST NO.	C ARD TYPE	DEPTH (m)	Т	*C	5 */	51	GMA-T	SPECIFIC	YOLU ALY-x1	., D	∆ D YN. M x 10 <sup>3</sup>	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DCITY	02	m1/I	PO4-		101AL-P			)3~N - al/l	\$1 04-\$1 49 - 01/1	рН
																						$\top$			
	,	,	SID	0000	2	141	3630	2	539	002	596	2 0	000	152	274										
	139		OBS	0000	2	141	3630	2	539					152	274										
			STD	0010	2	141	3630	2	539	002	5986	5 0	026	152	276										
			STD	0020	2	140	3631	2	540	002	597	6 0	052	152	277										
	139		OBS	0025	2	139	3630		540						278										
			STD	0030		138	3631		540	002			078		278										
			SID	0050		131	3631		542	002	586	8 0	130		280										
	139		OBS	0051		131	3630		542						280										
			STD	0075		923	3650		613	001	924	1 0	186												
	139		OBS	0076		917	3650		515		_	_			229										
			STD	0100		855	3654		533	001	738	7 0	232												
	139		OBS	0101	_	853	3654		634						215										
			SID	0125		822	3652		540	001			275												
	100		SID	0150		798	3651		645	001	640	1 0	316												
	139		OBS	0152		796	36509		645	001		7 0	200		207										
	120		SID	0200	_	771	3648		549	001	010	7 0	398												
	139		OBS STD	0203 0250		770 765	36476 3647		649 650	001	4 2 5 6	0 0	479		207 213										
			STD	0300		746	3644			001			560												
	139		OBS	0305		743	3643		652 653	001	019	0 0	200		216 216										
	137		SID	0400		666	3629		560	001	5 7 S A	٠ ،	720												
	139		OBS	0406		659	3628		561	001	יכוכ	5 0	120		205										
	139		STD	0500		502	3598		574	001	465	2 0	872		169										
			STD	0600		318	3569		691	001			011		122										
	139		OBS	10609		301	3566		693	001	J10.	5 1	011		117										
	13,		STD	0700		083	3540		714	001	101	5 1	132												
			STD	0800	_	890	3520		731	000			233		997										
	139		OBS	0812		870	35186		733		,,,,				992										
			STD	0900		758	3518		750	000	751	2 1	318		964										
			STD	1000		651	3515		762	000			386		938										
	139		OBS	T1011		641	3514		764	_		•	0		936										
			STD	1100		569	3510		769	000	558	7 1	446	_											
			STD	1200		505	3505		773	000			500												
	139		OBS	1269		471	3502		775			-			909										
			STD	1300	0	459	3502		776	000	489	2 1	550												
			STD	1400		431	3500		777	000			598		914										
			STD	1500		421	3499		778	000		_	646		926										
	139		OBS	T1520		421	3498		777			-			930										

	REFERENCE	1				- E MA	RSOEN	STATION T	IME		0	RIGINA	TOR'S						WAV	/ E					NODC	7
	CTRY ID.				LONGITUOE					YEAR						, 0	) F				1 0000	l l				
WITH COURT   WAND   W	NO.	-		1/10	1/10	- 10	1.	MO DAY H	R,1/10		+			-		-13.00	-+-		1		^		1			-
CONT   CAND   CONT	31138	3 YA	3506	N	04808 W	111				1968				, 1	1737	1	.5	02	3	2	×1	6 6			0005	1
							-	_			J.															
									OR					CODE		OBSE	ERVA	non s								
								+		+	_	-		-	1.6	+										
STD   0000   2129   3631   2543   0025575   0000   15271   15271   15271   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15274   15273   15274   15273   15274   15273   15274   1								102	314	24	0 1 1 3	В		_	<del>-</del>	1	_		_				т —	_		
STD   0000   2129   3631   2543   0025575   0000   15271   15271   15271   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15273   15274   15273   15274   15273   15274   15273   15274   1		MESSENG	CAST			m)	1 10	5 %.	SIGA	T-AN	SPECIFIC	VOLUA	, S	rÑ. Å	50		. 0	2 m1/1								- 1
129				ITPE							A I I I			x 10 <sup>3</sup>	VEC	.00,111			ν0	- 01/1	VQ - 01/1	µg - 01/1	у <b>д - а</b> 1/	1 yg - 01/	1	
129																					Ì					
STD   0010   2129   3631   2543   0025639   0026   15273     STD   0020   2130   3631   2543   0025679   0051   15276     STD   0030   2130   3631   2543   0025729   0077   15276     STD   0050   2128   3631   2543   0025780   0128   15279     STD   0050   2128   3631   2543   0025780   0128   15279     STD   0075   1999   3656   2597   0020707   0187   15276     STD   0075   1999   3656   2597   0020707   0187   15279     STD   0075   1999   3656   2597   0020707   0187   15279     STD   0010   1889   36575   2602   15248     STD   0100   1889   3653   2624   0018279   0235   15225     129   085   0104   1875   36519   2626   0018279   0235   15225     129   085   0150   1813   3648   2639   0016481   0323   15211     129   085   0150   1813   3648   2639   0016428   0407   15210     STD   0250   1775   3646   2647   0016428   0407   15210     STD   0300   1758   3644   2651   0016452   0572   15219     129   085   0311   1752   36441   2651   0016452   0572   15219     STD   0400   1671   3630   2660   0016452   0572   15219     STD   0400   1671   3630   2660   0016452   0572   15219     STD   085   0311   1752   36441   2651   0016452   00164		•		ST	p 0000	)	2129	3631	254	43	0025	575	0	000	15	271										
STO   OOZ		12	9	085	0000	)	2129	36311	25	43																
129				ST	D 0010	)	2129	3631																		
STO											0025	679	0	051												
STD   0050   2128   3631   2543   0025780   0128   15279   15279   STD   0075   1999   3656   2597   0020707   0187   15282   15279   15283   15279   15283   15279   15283   15279   15283   15279   15283		12	9									7.00		o												
129																										
STD   0075   1999   3656   2597   0020707   0187   15252   129   085   0078   1984   36575   2602   15248   15225   129   085   0104   1875   36519   2626   15225   15225   129   085   0104   1875   36519   2626   15222   15225   129   085   0150   1813   3648   2639   0016981   0323   15211   129   085   0150   1813   3647   2640   15210   15210   129   085   10208   1776   36471   2647   0016428   0407   15210   129   085   0300   1758   3644   2651   0016452   0572   15219   129   085   0311   1752   36441   2651   1520   15208   129   085   0400   1671   3630   2660   001579   0733   15208   129   085   10412   1657   36272   2661   15206			^		-						0025	780	) (	128												
129		12	9								00.20	707		107												
STO   O100   1889   3653   2624   O18279   O235   15225		12	0								0020	1101	U	101												
129		12	,								0018	279		235												
STD   0125   1843   3650   2633   0017469   0280   15216     STD   0150   1813   3648   2639   0016981   0323   15211     129   0BS   0156   1807   36477   2647   016428   0407   15210     129   0BS   T0208   1776   36471   2647   016428   0407   15210     STD   0250   1775   3646   2647   0016575   0489   15216     STD   0300   1758   3644   2650   0016452   0572   15219     129   0BS   0311   1752   36441   2651   2660   0015799   0733   15208     129   0BS   0311   1752   36441   2651   2660   0015799   0733   15208     129   0BS   T0412   1657   36277   2661   2676   2676   2676   2676   2676   2676     STD   0500   1523   3602   2672   0014820   0886   15176     129   0BS   T0518   1492   35972   2676   2676   2676   2676   2676   2676   2676     STD   0600   1267   3564   2697   0012526   1023   15104     STD   0700   1033   3533   2717   0010623   1138   15035     STD   0800   0842   3512   2732   0009110   1237   14978     129   0BS   0820   0809   35096   2736   2764   2765   2764   2765   2764   2765   2764   2765   2764   2765   2765   2764   2765   2765   2765   2764   2765   2		12	Q				_				0010		,													
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REFERENCE	SHIP LATE	INDE LO	DNGITUDE E	MARSI AUD?	DEN	STATION T (GMT)		YEAR	-	DRIGIN			DEP 10	I'm DEF	PTH		VA VE RVA TIONS	WEA-	CODES			DDON MOITATZ
CODE NO.	CODE	1/10	1/10	10*		MO DAY		12	CRUISI	2	TATION BBM US	r	1108				GT PER SE	0000	TYPE AM	r e		NUMBER
	YA 350		4800 W					1968	E 18	00			292			3	1 2	1	6 6			0006
311383	TA   350	0 14   0	4600 #	ادير	WAT		WIND		1	AIR TE			1			<u>'</u>	1 1 4	. ) ^1	1 0 10	•	'	0000
				1	COLOR		SPEED	MET	u. —	ORY	WET	VIS.	OB OB	5	SPECIAL ERVATIO	NS.						
					COOE	TRANS OIR.	FORCE			BULB	BULB	1000	DEPT	THS COS	LK YA IIO	,,,						
				ľ		03	520	16	0 2	23	197	8	14			$\neg$						
			T	1		\	1	1	1		-	5 / 0	ή_		1							T
	MESSENGR CAST	CARD	DEPTH (m)	1	℃	5 -4.	SIG	1-AN	ANOA	C VOLU	07	2 ∆ 0 2 N. M 2 10 <sup>3</sup>	٠   ٠	VEFOCITA 200MD	02	mI/I	PO4-P µg - 01/1	101AL-P	NO3-N #g - 01/l	NO3-N vs - 01/l	51 O4-01	
	HR 1/10		-				+		_		-	X 10°	+		+						-	-
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		STD	0000		19	3630	25		002	538	5 (	0000		5268								
	168	OBS	0000		19	36301	25							15268								
		SID	0010		20	3630	25			544		025		15270								
		SID	0020		21	3630	25		002	550	1 (	051		15272								
	168	OBS	0027		21	36295	25		007	1667	^			15273								
		STD	0030		20	3629	25			557		076		15273								
	140	STD	0050 0054		112	3628 36281	25 25		002	2551	, (	128		l5274 l5275								
	168	08S ST0	0075		958	3645	26		00.2	2047	2 (	185		15239								
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	100	510	0100		396	3653	26		001	845	0 (	234		15227								
	168	085	0109		382	36539	26		001	045		, 2 ) 4		15225								
	100	STD	0125		356	3652	26		001	763	8 (	279		15220								
		SID	0150		322	3649	26			712		322		15214								
	168	OBS	0162		308	36484	26							15212								
		STO	0200	17	780	3647	26	46	001	644	2 (	0406	. 1	15210	)							
	168	OBS	T0215	17	771	36466	26	48						15209	)							
		STD	0250	1	771	3646	26	47	001	1650		489		15215	•							
		STD	0300	17	755	3644	26	50	00]	1641	7 (	571		15218								
	168	OBS	0312		748	36435	26							15218								
		SID		_	667	3628	26		001	585	2 (	732		15207								
	168	OBS	T0404		62	36275	26	_						15206								
		STD			10	3598	26		001	1482	6 (	886		15171								
	168	OBS	T0599		320	35686	26		00.	333	,			15122								
		SID			317	3568	26			1323		1026		15121								
	140	SID			)44	3533	27		001	1082	U	1146		15039								
	168	OBS SID	0790 0800		356 343	35130 3513	27 27		000	905	2	1246		14982 14979								
		STD			725	3513	27			736		1328		14950								
	168	OBS	10990		537	35115	27		000	, , 50	1	. ) 2 0		14930								
	100	STD			529	3511	27		000	0623	7	1396		14929								
		STO			559	3508	27			0559		1455		14917								
		STD			503	3505	27			0515		1509		1491								
	168	OBS	1255		478	35032						/		14909								
	• • •	STO			461	3502	27		000	0491	9	1559		14910								
		STO			432	3500		77		477		1607		14914								
		510			417	3499	27	78	000	)474	7	1655	,	1492	5							
	168	OBS	T1553	04	415	34980	27	78						14933	3							

REFERENCE	SHIP			-	E MAI	SDEN	STATION T				NATOR	R*S	DEPTH	MAX		WA	VE	w E		CLOUD			NODC	1
CTRY ID.	COOL	KTITUO.	1/10	NGITUDE	3 10.	JAKE	MO DAY H	1	re a R	CRUISE NO.	STATI		TO BOTTOM	0.0	0		A TIONS		ne l	TYPE AMI			TATION UMBER	
311383	VA 35	507		4805 W	113	1			968			1	3345	15	1	2							0007	
1 311303	1 IM   32	101	N 1 02	4005 W J	1113	WA		VIND	BARC	4 10 71	MP.	c	NO.		-	12	12	X	1 1	8 4	1	1	0007	
						COLOR		SPEED	METE	R DRY	W		0.00		CIAL /ATIONS									
						CDDE	Im)	FORCE	[mbs	-+	BU	_	+											
				,		<u>.</u>	03	512	19	215	16	1 8	13	L.,		<u></u>								
	MESSENGE C	AST	CARD	DEPTH (m)	.	. €	s •/	SIGM	A-1	SPECIFIC VOL	UME	E A D	sou	UND	0 2 ml/		O4-P	TOTAL		NO2-N	NO3-N	St O4-51	рН	3
	HR 1/10 T	10,	TYPE							ANOMALT-I	110,	x 10 <sup>3</sup>	VELC	DCITY	•••	141	g = 01/I	48 - DI	Λ.	ug - o1/l	ا/اه - وبر	yg - e1/1	, pr	C
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	_		STD	0000		149	3638	254		002563	1	0000	152											
	147		OBS	0000		149	36376	254					152											
			STD	0010	_	149	3638	254		00 25 65		0026	152											
	147		STO OBS	0020		150 150	3638	254		002570	10	0051	152											
	14 (		SID	0026 0030		150	36382 3638	254 254		002572	2 1	0077		282										
			STD	0050	_	148	3638	254		002575		0129												
	147		085	0051		148	36382	254		002313		012,	152											
			STD	0075		058	3661	258		002185	2	0188	152											
	147		OBS	0077		050	36620	258						266										
			STD	0100	1	953	3657	261	0	001960	6	0240	152	243										
	147		OBS	0101		949	36563	261					152	242										
			STD	0125		880	3654	262		001806		0287												
			STD	0150		828	3652	263		001704	4	0331		216										
	147		085	0151		826	36520	263		001445		0115		215										
	147		STO OBS	0200 T0203		784 782	3648 36480	264 264		001645	U	0415												
	14 r		510	0250		775	3648	264		001645		0497	152 152											
			STD	0300		757	3647	265		001622	_	0578												
	147		OBS	0300		757	36472	265		001022	. 0	0570		219										
	147		OBS	T0397		688	36332	265						213										
			STD	0400	1	681	3632	265	9	001588	35	0739												
			STO	0500	1	445	3591	268	1	001393	88	0888	15	150										
			SID	0600		230	3558	270		001223		1019	150	091										
			STD	0700		036	3532	271		001075	0	1134		036										
	147		obs	0795		871	35152	273						989										
			SID	0800		862	3515	273		000921		1234		986										
	147		STD	0900 10995		699	3507	275		000741	. 5	1317		939										
	147		OBS STD	1000		586 584	35026 3503	276 276		000621	1	1306	_	910										
			STD	1100		539	3503	276		000571		1385		910 908										
			STD	1200		501	3503	277		000530		1500		909										
	147		OBS	1253		483	35027	277		- 00230		1,000		911										
			STD	1300		468	3502	277		000501	13	1551		913										
			STD	1400	0	441	3501	277		000482		1600		918										
			SID	1500	0	420	3499	277		000478	7	1649	144	926										
	147		OBS	T1525	0	416	34979	277	7				145	928										

REFERENCE	SHIP		n.		DEST	MARSDEN SOUARE	STATION THE			ORIGIN	ATOR'S		DEPTH	MAX, DEPTH	0.0	WAV		WEA-	CLOUD			NODC
CODE NO.	COGE	LATITU	1/10	LONGITUDE			MO DAY HI		AR		TATION		TO BOTTOM	OF S'MPL'S		SERVA	PER SEA	CODE	TYPE AM			TATION
311383	3 YA	3508		047537W					68	E18 00	8		3950	14	01		3		8 2			0008
						WAT	ER W	ONI	BARO	AIR TE	4P. ℃	T	NO.	SPEC	141	i .	•					. ,
						COLOR	TRANS. DIR.	OR I	(mba		WET	CODI	OBS. DEPTHS	OBSERV								
						CODE		506	208	+		-	<b>├</b>			ŀ						
							100	306	206	210	148		14			<u> </u>						
	MESSENGE TIME	CAST	CARE		lm j	1 10	5 %.	SIGMA.	-1	SPECIFIC VOLU	ME 2	YN. M	sou		02 ml/		4-8	TOTAL-P	NO2-N	NO3-N	SI D4-5	рН
	HR 1/10	1	11176					<u> </u>		×1404 ×(1-1)	`	X 103	. AETO	CITY		νg	- 01/1	µg - 01/1	ا/10 - وبر	yg - a1/1	μg - a1/i	
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			ST			2160	3638	2539		002591	5 0	000	152	80								
	128	3	OBS			2160	36377	2539					152									
			SŤ	_		2160	3638	2539		002595		026										
	120	,	51			2159	3637	2539		002599	9 0	052										
	128	,	0B5			2159 2159	36372	2539 2540		002401		070	152									
	128		0B\$			2160	3638 36388	2540		002601	0	078	152 152									
	120	,	51			2159	3640	2541		002591	9 0	130										
	128	3	OBS			2140	36526	2556		002371	, 0	150	152									
			5.7			2128	3652	2559		002432	4 0	193										
	128	3	OBS	_		1908	36482	2615				• • •	152									
	-		ST	D 010	0	1903	3648	2616		001896	2 0	247										
			5 T	D 012	5	1852	3650	2630	1	001770	7 0	293	152	218								
	128	3	085			1819	36509	2640					152	213								
			5 T			1816	3651	2640		001685	в 0	336										
	128	,	OBS			1782	36473	2646					152									
			ST			1782	3647	2646		001649	-	419										
	1.00		5.7			1771	3647	2649		001640	1 0	501	152									
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	135	5	OB:	_	T104			588	35		27						_	491											
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			S	TD	120	0	0	505	350	5	27	73	000	518	6	464	14	491	1										
				TD	1300			466	350		27		000	498	6 1	515	_	491	-										
	135	5	OB.		1310			463	350	-	27				_			491											
			_	TD.	1400			437	350		27			484	-	1564		491											
	300	-	-	TD	1500			419	349		27		000	484	7	1613		492											
	135	~	OB:	`	1158	,	U	411	349	119	27	78					- 14	493											

E	SHIP			100	GITUOE E	E MA	RSDEN UARE		ON TI		YEAR		DRIGINATI	_		DEPTH TO	MAX. DEPTH	OB	W A SERV	VE ATION	s	WEA	CLO			172	OOC	1
5.	CODE	LATITU	L.	LONG	GITUOE E	30					TE AR	CRUISE NO.	STA			BOTTOM	OF S'MPL'S			r PER :		CODE		- 1			UMBER	
ο.			1/10		1/10	10	-		AY H			+		(410)	- +			-	10	1			1				2022	1
83	YA	3508	ON	047	7440W	1113	-		3 1		968			_		1879	14	28	,		4	X 1	8	2			3012	ļ
							WAT	ER	W	INO	BAR	O	AIR TEMP.	_	- VIS.	NO. OBS,		CIAL										
							COLOR	TRANS.	OIR.	SPEED	(mbi			WET		DEPTHS	OBSERV	ATIONS										
							CODE	-		FORCE	+			190	_	14			1									
								Ļ	28	515	17	2 2	28 1	-		14			4		_		_	-				_
	MESSENGE TIME	CAST	CAR		DEPTH (m)	. !	1 °C	١,	٠/	SIGN	A T	SPECIFI	VOLUME		DYN. M.		ONU	02 ml/		PO4-P		TA L-P			$NO_3-N$	\$104-\$1	рН	
	HR 1/10	T NO.	TYP	E	OLI III WIII	'		'	•	1		ANON	ALY-XID7		x 10 <sup>3</sup>	\ AET	DCITY		à	/g + 01/l	P.6	- at/t	ng - 0	21/1	yg - at/l	µg - a1/l		_
	7,10	-						1																				
- 1		1	ST	'n l	0000	١ :	2088	362	7	255	1	002	4788	١,	0000	15	260		,		,							
	129	0	085		0000		2088	362		255							260											
	12:		ST		0010		2087	362		259		002	4819	(	0025		261											
			ST		0020		2086	362		255			4834		0050		263											
	129	9	085		0024		2086	362		255	1					15	263											
			51		0030		2079	362	27	255	3	002	4702		0074	15	262											
	129	9	085		0047		2060	362	70	255	9						260											
			51		0050		2045	362	24	256	0	002	4099	-	0123		256											
	129	9	085	5	0071		940	36	177	258	33						230											
			57	0	0075		1917	362	21	259	92	002	1193	- 1	0810		225											
	129	9	OBS	5	0094		1826	36	347	267	26						204											
			51	D	0100		1813	36:	35	267	29	001	7735		0228		201											
			51	D	0125		1765	36	37	264		001	6528	-	0271		192											
	129	9	083	5	0140		1742		387	264							188											
			51		0150		1732	36		269		001	5872		0312		186											
	12	9	085		T0189		1692		318	26							180											
			51	-	0200		1681	36		269			5373		0390		178											
			51	_	0250		1629	36		266		001	5011		0466		170											
	12	9	OBS		0279		1599	-	168	266		001			0540		165 161											
		_	51		0300		1576	36	_	26°		001	4498		0540		149											
	12	9	OBS		T0369		1507	36				001	4170		0683		154											
			51 51		0400 0500		1507 1435	360 350		26° 261			3871		0823	_	146											
	12	0	083	-	0550		1358		779	26		001	2011				128											
	12	7	51		0600		1193	35		27		001	1887		0952		077											
			51	-	0700		0919	35		27			9675		1060		992											
	12	Q	0B 9		0729		0854		121	27						_	971											
	12	7	51		0800		0733	35		27		000	7548		1146		936											
			51	-	0900		0603	35		27			6020		1214	-	901											
	12	9	08		T0910		0593		069	27			-			14	899											
		-		Τp	1000		0551	35		27		000	5502		1271	14	897											
				TD	1100		0509	35		27		000	5125		1325	14	896											
	12	9	085		1154		0489	35	040	27	74						897											
	_		5	Ţρ	1200		0473	35	03	27			4900		1375		898											
			S.	τo	1300		0443	35	01	27			4752		1423		902											
			5	TD	1400		0418	34		27		000	4739		1470		908											
	12	9	08:	S	T1412		0415	34	974	27	77					14	909											

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CTRY ID.	SHIP	LATITUDE	LONG	SITUDE	NDCTR	MARSDEN SQUARE	STA	IGMT	1ME	YEAR	CRUISE	ORIGINA	ATOR'S LATION		DEPTH TO	DEPTH		WAVE SERVATIONS	W TH	EA- CI	ODES	-		NODO	Z
CODE NO.	CODE	1/10		1/10	ا ق	10" 1"	MO	DAY			NO.		UMBER		BOTTOM	OF S'MPL		HGT PER S		Dr.	E A MIT			NUMBE	
311383	YA	34581N	048	021W	1	13 48	10	24	136	1968	E18	013	3		4572	43	30	5 5	×	1 0	1			001	3
							ATER		MIND	BAR		AIR TEN		VIS	NO.		CIAL			-	-		1		
						COLO		S. DIR.	SPEE	4. 4	ER .	DRY	W ET SULB	CODE	OBS. DEPTHS	OBSER	VATIONS								
						-	-	+-	FORC		-	-		-	22										
					-			29	512	23	8 2	20	177		21										
	MESSENGR TIME 0	CAST CA	AD PE	DEPTH (	m)	T °C		5 1/	\$1G	MA-I	SPECIFI	C VOLUA	۶. S	AN. M	50U VELO		02 ml/1	PO4-P	TOTAL		2-N	NO3-N	5104-		н
	HR 1/10	NO.	Pt						1_		114014			x 103	VELO	CIII		1/10 - وبر	٥ - ور	1/1 1/0	- 01/	ا/۱۵ + ولا	µg - at	V1	
									1		1		1								1				ĺ
			TD	0000		2115		26		43	002	5555	0	000	152										
	136	OB		0000		2115		263		43					152										
			TD	0010		2115		27		43		5579		026	152										
	126	OB	ĮD.	0020		2113		27		44	002	5550	, 0	051	152										
	136		TD	0030		2112 2108		5268 527		45	00.2	5464		077	152 152										
	136	OE		0049		2094		256		48	002	J-40-	• •	011	152										
	100		TD	0050		2090		525		49	002	5187	7 0	127	152										
	136	OB		0073		1997		226		72					152										
		5	TO	0075	5	1989	36	26	2.5	77	002	2624	• 0	187	152	245									
	136	OB		0098		1910		538		19					152										
			TD	0100		1903		553		20		8622		239											
			TD	012		1833		550		36	001	7228	3 0	283	152										
	136	OB		0148		1789		472		44					152										
			TO	0150		1788		47		45		6445		326	152										
	126		TD	0200		1768	-	46		49	001	6217	, 0	407	152										
	136	OB	Tp	T0202		1767 1763		462		50	001	6284	. ^	488	152 152										
	136	OB		0297		1742		428		53	001	0204	• 0	400	152										
	130		Tp	0300		1739		420	_	53	001	6179	9 0	570	152										
	136	08		0396		1639		232		62		011.		,,,	151										
			TD	0400		1633		22		63	001	5510	0	728	151										
			TD	0500	)	1481	35	94	26	76	001	4489	9 0	878	151										
	136	08	S	T0599	9	1302	35	672	26	93					151	16									
			TD	0600		1299		67		93		2946	-	015	151										
			Tρ	0700		1059		36		15	001	0871	1	134	150										
	136	OB		0796		0866		151		31	000			• • •	149										
			TD	0800		0859		15		32		9167 7355		234	149										
	126	0B	TD	10994		0695 0582		07		50 61	000	(300	, 1	317	149										
	136		TD .	1000		0579		023		62	000	6162	, 1	385	149										
			TD	1100		0532		02		68		5629		444	149										
			TD	1200		0492		03		73		5192		498	149										
	136	OB		1246		0476		026		74			•		149										
			TD	1300		0461		01		75		4992		549	149										
			TD	1400		0437	_	99		76	000	4919	1	598	149										
	136	OB		11492		0419		974		77					149										
			TD	1500		0418		97		76		490		647											
			TD	1750		0398		97		79	000	4863	, 1	769	149										
	158	OB		1958		0381 0378		966		80	000	4828		891	149										
	158	OB	TD c	2456		0341	-	963		84	000	4020	) 1	0 7 1	150										
	1 7 0		TD	2500		0337		96		84	000	4669	, ,	128											
	158	OB		T2949		0299		946		86	~~ •			0	151										
			TD	3000		0295		94		86	000	4519	5 2	358											
	158	OB		T3480		0261		921		88			-		151										
	158	OB		3965		0234		909		89					152										
		· ·	TD	4000	)	0233	34	90	27	89	000	4337	7 2	800	152	276									
	158 158	OB OB	S	T4217	7	0230 0230		890		'88 '88					153 153										

). O.	SHIP	LATITU		LONGITUDE	Deift	MAR SOL	SDEN		ION IGM1	1	YEAR	CRUISI		ITAT MUI	ION		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL"	08	WA SERV			WEA- THER CODE	CC	DES			NODC STATION NUMBER
_			1/10		-		+ ' +			HR, 1/10		<u> </u>	_		001	$\pm$			1	+-	1	36.00		1	1	-	+	
8 3	YA	3508	011	048020W		1113	_		25	143	1968		_	_	- T	_	3582	04	32	4	15 1		X 2	8	8	i		0014
							WA	T	-	WIND	MET	>- ├	AIR TEA		_	VIS.	NO. OBS.		CIAL									
							COLOR	TRANS (m)	DIR	FORCE	(mbi		UKT B		ILB	CODE	DEPTHS	DESERV	ATIONS	1								
									28	\$05	24	9 2	0.8	18	88	8	09			1								
	MESSENGI TIME HR 1/10	NO.	CARD TYPE		(m	,	2 2	5	٠/	SIG A	A-1		C VOLU			103 103		CITY	O2 ml		04-1		DTA L - P	NO2		NO3-N ug - ot/l	\$1 O4= yg - ot	
		1						1																				
	1	' '	ST	000	0	2	100	36	30	255	0	002	492	5	00	00	152	263										
	143	3	oBs	000	0	2	100	36.	296	255	0						152	263										
			ST	001	0		089	36		255			470	-	00	_	152											
			STI			_	070	36		255		002	426	7	00	49	152											
	14	3	OBS	002			065		290								152											
			STO	-			034	36		256		002	347	8	00	73	152											
	143	3	OBS	004			983		276			00.5		_			152											
			STI			_	974	36	_	258		002	190	9	01	18	157	238 228										
	14	3	OBS	006 D 007			926 894	36	341	. 260 260		00.1	963	0	01	70		220										
	14	2	OBS	007			842		368			001	703	7	01	10		208										
	14.	,	STI				821	36		26:		001	758	4	0.2	17		204										
			STI				782	36		264			639		02	-	15											
	14	3	OBS	013			770	_	455	-				_	- 4			196										
		-	\$ T			_	756	36		26!		001	590	1	02	99		194										
	141	3	OBS	017			730	36	408	26!	54						15	191										
			ST	020	0	1	714	36	37	26!	5 5	001	560	8	03	78	15	189										
			ST	0 025	0	1	671	36	26	26!	5 7	001	562	4	04	56		183										
	14	3	OBS	026	7	1	655	36	208	26!	5 7						15	180										
			ST				621																					
	14:	3	OBS	T035	5	1	558	36	14F	26	74P																	

ICE	SHIP	LATITU	30	LON	IGITUDE 3	MAR	SDEN	STAT	IDN TI		YEAR	CRUISE		TATIO	DN	DEPT	OF	H OI	WAVE	ions	WEA	COL			51	NODC
NO.	.006		1/10		1710	10*	1.	MO I	H YAC	R.1/10		NO.		UM	BER	80110	M S"MP		HGT PI	EN SEA	CODI	TYPE	A M I		N	UMBER
383	YA	3507	ON	04	756 W	113	57	10	26 1	27 1	968	E18	01	5		433	4 19	27	x x		X1	8	7			0015
اد ه د	10 1	3001	OIN	04	ן או טכיי	1113	WA			IND	1		AIR TEA		čΙ	NO.	1	•	7 7		1 11	10,	'		, ,	,,,
								TRANS		SPEED	METE	)• <u> </u>	DRY	w	VIS	P 085	LOBSE	PECIAL								
							CODE	Imi	DIR	FO#CE	(mbs		BULB	BU		DEPTH	IS OBSE		1							
									27	510	21	n 3	22	19	90 8	14	1		1							
г						_		1	2.1	T	6.1	1 6	~ ~	1	_	1		Т	1			1	- 1			
- 1	AESSENGR TIME	CAST	CAR		DEPTH (m)	1	r *c	5	٠/	SIGM	I-A		C VOLU		₹ △ D		OUND	O2 ml		4~P	TOTAL-P			ио₁−и	51 O4-51	рН
- 1	HR 1/10		TYP	١						!		AIVON			X 103		FDCITA		hō -	01/1	1/1ه - وبر	ng - o	1/1	µg - at/1	µg - 01/l	Ĺ
										1								ì		1					ĺ	1
'		1	ST	'מ	0000	່ 2	108	36;	28	254	7	002	521	7 '	0000	1	5265		'							
	127	,	OBS		0000		108		85	254							5265									
			ST		0010		102	36	29	254		002	510	0	0025	1	5265									
			ST		0020		093	36		255			491		0050		5265									
	127	7	OBS	_	0025		088	36		255						-	5264									
			ST		0030		081	36;		255		002	470	3	0075		5263									
			ST	D	0050	2	051	36;		256	51	002	407	0	0123	1	5258									
	127	7	OBS		0050		051		266	256							5258									
			ST	D	0075		852	36		262	0.9	001	853	1	0177	1	5208									
	127	7	OBS	;	0075		852		360	262						1	5208									
	127		OBS		0099		790	36:	367	263	36					1	5195									
			ST		0100		789	36		263		001	706	4	0221	. 1	5195									
			ST	D	0125	1	775	36	39	264	+ 1	001	667	8	0263	1	5195									
	127	7	OBS	5	0149	1	760	36	391	264	15					1	5194									
			51	0	0150	1	759	36	39	264	¥5	001	636	3	0305	1	5194									
	127	7	OBS	5	0199	1	726	36	365	265	52					1	5192									
			ST	D	0200	1	725	36	36	265	5 2	001	592	7	0385	1	5192									
			ST	D	0250	1	672	36	28	265	8 6	001	546	1	0464	1	5183									
			ST	D	0300	1	624	36	21	266	54	001	5090	0	0540	1	5176									
	127	7	OBS	5	0300	1	624	36	206	266	54					1	5176									
	127	7	OBS	5	T0397	1	548	36	080	267	71					1	5167									
			ST	D	0400	1	544	360	7	267	7.2	001	460	3	0689	1	5166									
			S T		0500		392	35		268			365		0830	_	5131									
			ST		0600		221	35!	56	270	0 (	001	218	6	0959	1	5087									
	127	7	OBS		10600		221																			
			S T	-	0700		004	35	37	272	25	000	981	2	1069	1	5025									
	127	7	OBS		0799		823																			
			ST	_	0800		821	35		274			805		1158		4972									
			ST		0900		669	35		275			669		1232		4928									
			ST		1000		561	350		276		000	580	8	1295		4901									
	127	7	OBS		T1001		560		36	276							4900									
			ST		1100		525	350		277			1544!		1351		4903									
			ST		1200		493	350		277		000	512	3	1404		4906									
	127	7	OBS		1248		479		936	277						_	4909									
			ST		1300		1465	350	_	277			489	_	1454		4911									
		_	51	-	1400		440	350		277		000	480	3	1502		4918									
	12	7	OBS	5	T1491	0	421	34	988	277	78					1	4925									

EF ERE	NCE	SHIP					-	=	MARS			TION TI				ORIGIN	ATOP'S			EPTH	MAX		WAV			WEA-		OUD			NODC
	ID,	COOE	LATITU		ro	NGITUE	lõ.	3	200	A.R.E		(GMT)		YEAR	CPL		OITATE			TOM	OF	"	BSERVA'			THER		ODES			HUMBER
DE	NO.			1/10			1/10	=	10.	1.	MO	DAY	R,1/10		N	0.	NUMBE	A	- 60	110/4/	S'MPL"	S DIR.	HGT P	ER S	E A		TYPI	A M T			
11	383	YA	3456	N	04	750	W		113	47	10	27 1	34 1	968	E:	8 01	6		45	72	03	23	_1		2	X 2	8	В	1		0016
										WA	TER	V	/IND	BARC		AIR TE	MP. °C			10.	SPE	CIAL									
									1	COLOR	TRANS	OIR.	OR	METE		DRY	W E1	co		BS. PTHS	OBSERV	A TION S	5						-	-	
									}		-		FORCE		-		-	+	+.	_			-								
				_		_		- 1			-	23	516	16.	2	222	191		-47	9			1,								
		MESSENGR	CAST	CA		DEF	TH (m)		1	°c	s	• /4.	SIGM	A-T		HIC VOLU		∆ .≩		sour		O 2 m1.	/ 1	4-6		TA L - P			NO3-N	SI Da-S	
		HR 1/10	of Proper	TY	PE										An	UMAU-1		x 10	3	VELO	CIIA		νQ	+ 91/1	1 26	• 01/1	ng -	al/I	νg + α1/l	90 - at/	
				S	TD	0.0	000		20	080	36	28	255	4	00	2451	8 (	000	0 .	152	58										
		134		OB	S	0.0	000		20	980	36	281	255	4						152	58										
				5	TD	0	010		20	78	36	28	255	5	00	2451	0 (	002	4	152	59										
					T D	0.6	020			64	36	28	255		00	2419	4 (	004	8	152											
		134	•	OB			020		_	64		279	255							152											
					TD		030			25	36		256		0.0	2343	2 (	07	2	152											
		134	•	ОB			043			989		223	257							152											
				_	ΤD		050		_	982	36		257		00	2267	9 (	11	8	152											
		134	•	OB			064			969		205	257							152											
					T D		075			902	36		260		0.0	1960	3 (	17	1	152											
		134	•	OВ		-	88			339	_	517	263							152											
					T D		100			808	36		264			1656		21		152											
					TD		125			757	36		265		00	1569	0 (	25	7	151											
		134	•	OB			129			751		462	265						_	151											
				_	ΤD	_	150			732	36		265		00	1526	4 (	29	5	151											
		134		OB			172			711		431	266							151											
				_	TD	-	200			82	36	_	266			1510		37	-	151											
				_	ΤD	0.	250		16	31	36	21	266	2	00	1505	8 (	)44	7	151											
		134	•	08			260			521		189	266							151											
					TD	_	300		_	82	36		266		00	1475	5 (	52	1	151											
		134		08	S	10	350		15	36	36	082	267	4						151	56										

TRY ID.	SHIP	LATITUDI	/10	LONGITUDE 1/10	DRUFT	MARSO SOUA	RE	STATION IGMT	1	YEAR	CK	ORIO RUISE NO.	STA '	TION		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'		BSER	AVE VATION		WEA- THER CDDE	CLOUD CODES			NODC STATION NUMBER
311383	VA	35000		048000W	$\Box$	113			127	196	8 F	18 0	17		1.	3658	14	12	, ,	3		X 1	8 3			0017
J11J0J		3,000		- 00000 H	' '	اردد	WAT		WIND	1	RO.		TEMP.	2		NO.			٦,,	10 1		1 7 2			,	001
							OLOR	TRANS. DIR		0 M	ETER	BULB		VET (	CODE	Oer l	OBSERV	CIAL 'ATION	s							
						-	CODE	-	FOR	-	nbsl	+	+	-					-							
						. 1		28	522	2 1	83	214	1	77	8	14			1,		_					
	MESSENGE TIME HR 1/10	NO.	CARD	DEPTH	(m)	τ	°C	s */	SIC	SMA-T	SPI	ECIFIC VO	DLUME -1107		∆ D. 1. M. 103	. VETO	CITY	0 2 m	1/1	PO 4-P yg - 01/		TOTAL=P	NO2-N µg + at/l	NO3-N pg - a1/1	\$1 O4-	
																									ĺ	
			STO	0000	0	20	67	3629	25	559	0	0240	92	00	00	15	255									
	12	7	OBS	000		20	67	36294		559							255									
			STO				64	3629		559		0240	-	00	_		255									
			STO			20	61	3629		60	0	0240	49	00	48	15										
	12	7 .	OBS	002			59	36282		60							257									
			STE			-	30	3627		66		0234		0.0	_											
			STE			_	33	3624		90	0	0212	81	01	16		226									
	12	7	085	005			33	36241		590	_						226									
		_	STO				17	3631		500	0	0204	46	01	68	15.										
	12		OB S	007	-	_	17	36314		500							226									
	12	7	obs	009			40	36391		525							209									
			SIC	-			39	3639		26		0180		0.2			209									
		_	STE		-	_	06	3644	_	538	O	0169	81	0.2	60		204									
	12	7	obs	014		_	81	36461		545							201									
			STO	-			81	3646		545	U	0163	6/	03	02											
	12	/	OBS	019		_	52	36396		548		0345			٠.		200									
			SIC				49	3639		648		0162		03		15										
		_	STO				75	3633		561	U	0151	83	04	62		185									
	12	/	OBS	029			18	36270		570	0	0.1.4	21	0.5	٠.		174									
			STO			_	13	3626		571	U	0144	30	0.5	36											
	12	/	OBS	T039.			26	36128		080	_	0127		0.6	<b>,</b> ,		160									
			5T2			_	19	3612 3595		581 587		0137		06 08			159 146									
	12	,	OBS	058			32	35800	_	591	U	0133	91	UO	10		134									
	12	ľ	ST	_			10	3576	_	598 591	0	0125	0.5	0.0	42		120									
			ST				009	3551		735		00089			49		29									
	12	7	OBS	078			119	2221	2	130	0	,000,	00	10	7,	10	227									
	12	ı	5Ť[				86	3530	2	755	Ω	0069	110	1.1	28	1.63	959									
			STE				39	3513		763		0060		_	93	_	917									
	12	7	OBS	1097			59	35038		766	0	0000		11	, ,	_	396									
	12		ST			_	48	3504		767	0	0056	37	12	52	_	395									
			STE				0.9	3503	_	771		0052		13			396									
			ST				77	3502		774		0050		13			900									
	12	7	obs	121			73	32-2	-			- 20														
			STE				53	3501	2	776	0	0048	56	14	0.8	14	906									
			STO				35	3501	-	777		0047		14			915									
	12	7	0B.5	T143			30	35002		778				-			920									

ID,	SHIP	LATITU		LO	NGITUDE B	20 W V	PSDEN UARE	5	TATIO (G)	N TI		YEAR	CRUIS	ORIGI		TOR'S	DEPTH TO	DEPTH OF	. 1	WAVE SERVATI	ONS	WEA-	CLOUG			NOOC
NO.			1/10		1/10	10°	1.	MC	DA	Y H	1.1/10		NO			MBER	BOTTOM	S'MPL"	S DIA.	HGT PE	R SEA	CODE	TYPE AM	+		NUMBER
383	YA	3500	ON	04	8000w	113	5 8	10	29	, 1,	26 1	968	E1	0 1	A		2926	11	30	6 5	T			1		
								ATER			IND	BARG		AIR TI			NO.			16 15	1	! ×1	1 3 12	1	- 1	0018
							COL		N.S. (	) IR.	SPEED OR FORCE	M ETS	R	ORY BULB		WET COD	1 000		CIAL (ATIONS							
									2	2	506	20	1 :	18	1	188 8	14									
	MESSENGE TIME HR 1/10	of NO.	CAR		DEPTH (m)		1 10		5 ./		SIGM	-	SPECIF	C VOL	UME		soi	JND	0 2 ml/	PO 4		1-1 ATC	NO2-N µg + at/1	NO3-N		
						-		-			-					- X 10°				+			24 - 0.71	pg - 01/1	pg - 01/	`
	l	1 [	ا 51	n .	0000	1	120	١			1 20.	ا				1	İ				- 1	- 1			1	
	124						120		631		254		002	536	8	0000		269								
	126	3	083		0000		120		630		254							269								
			51		0010		119		631		254	_		537		0025		270								
	126		51 083		0020		118		631		254		002	537	8	0051		272								
	120	,	51		0024		118		631		254						15									
	120				0030		118		631		254		002	541	. 5	0076	15	273								
	126	)	085		0047		119		630		254						153	276								
	126		SI		0050		105		633		255		002	499	9	0127	157	273								
	126	)	085		0070		016		644		258						157									
	126		ST		0075		995		645		259		00.2	140	1	0185	152									
	126	)	085		0092		933		646		260						152									
			ST		0100		911		648		261			918		0235	152	231								
	126		ST		0125		853		651		263		001	763	8	0281	157	219								
	126	•	083		0137		832		651	8	263						152	215								
	126		S T		0150		820		651	_	264		001	693	1	0325	152									
	126	•	085		T0181		793		649	5	264						152	210								
			SI		0200		782		648		264			641		0408	152	210								
	126		ST		0250		747	_	644		265		001	605	3	0489	152	809								
	126	,	085		0263		737		642	8	265						152	207								
			ST		0300		705	3	638		265	8	001	567	6	0568	152	203								
	126	•	OBS		T0338		665		631	5	266						151	96								
	101		ST		0400		566		514		267		001	459	0	0720	151	174								
	126	•	085		0485		439		594	4	268						151	46								
			ST		0500		422		592		268		001			0860	151	42								
	121		ST		0600		291		5 <b>74</b>		270		001	227	7	0988	151	13								
	126	'	OBS		0629		248		569	3	270						151	03								
			S T		0700		131		556		271	7	001	073	9	1103	150	73								
	126		OBS		T0774		999		542	4	2730						150	36								
			ST		0800		940	3 !	536		273	5	000	899	0	1202	150	18								
			ST		0900	0	743	3 !	518		275	2	000	727	9	1283	149									
	126		0B S		0915	0	718	3	515	3	275:						149									
			ST	Ō	1000	0	594	3 !	506		276:	3	000	610	2	1350	149									
			ST	D	1100	0	490	3	501		2772		000			1406	148									
	126		085		T1103	0	488	21	501	0	2772					100	148									

ID.	SHIP CODE	LATITU	DE 1/10	LO	NGITUOE \$	MAR SOL	SOEN JARE	- (0	ON TIA	_ }	YEAR	CRUISE NO.		TOR'S ATION JMBER		DEPTH TO OTTOM	MAX. DEPTH OF S'MPL"	03		VE ATIONS	T t	EA-	CODE			NODC STATION NUMBER
-							+					_	1		-+-		_	1	1	1				-		
383	YA	3457	N	04	758 W	1113		10 3	0 1	84   1	968				4	572	12	28	٦[4	4	X	1	8 1	į		0019
							COLO	<del></del>		SPEED	BARC	)·	DRY TEM		115.	NO.		CIAL								
							CODE	TRANS.	OIL	FORCE	(mba		ULB	BULB	006	DEPTHS	OBSERV	ATIONS								
								1	23	515	178	1 2	25	214 8	1	11			1							
	MESSENGE				1	$\overline{}$		+			1			150	_	Τ			1		Τ.			Τ.		
	TIME	O NO.	C A		OEPTH (m)	1	τ.	5	4.	SIGM	A-T		ALT-110		Μ.		DCITY	03 ml/		PO4-P g = p1/I	TOTAL D - Gu		NO2=N µg = a1/l	NO3-N vg - at/1	51 O4=	
}	HR 1/10							+						+ * '	0-	+	-		-	<u>.</u>	-				-	
1		l			2000			1			_								1			1			1	1
				TD	0000		107	363		254		002	5093	000	0	157										
	184	+	0B		0000		107	362		254		000				152										
				TD TD	0010 0020		106 097	363 363		254 255			5120 4931	002			267									
	184	r.	08		0020		097	362		255		002	4731	00:	0		266 265									
	10-	•		3 T0	0030		087	362		255		002	4817	00	6		265									
	184	4	OB		0047		032	362		256		002	4011	00	,		253									
				TD	0050		005	362		257		002	2857	012	13		246									
	184	4	08		0069		878	362		260				٠	_		214									
				Tp	0075		860	363		261		001	8789	01	5	152										
	184	4	08	S	0091	1	822	364	65	262	16						204									
			S	TΟ	0100	1	812	364	7	263	8	001	6892	02	9	15	202									
			S	ΟT	0125	1	787	364	6	264	4	001	6400	0.26	1	15	199									
	184	4	08	S	0136		778	364	62	264	6					15	198									
				ΤĐ	0150		771	364		264		001	6131	030	2		199									
	184	4	OB		0181		754	364		265							199									
				TD	0200		723	364		265			5614				192									
				TO	0250		643	362		266			4891				175									
				TD TD	0300 0400		563 409	361 359		267			4212 2894			15	157									
				TD	0500		260	357		270			1690				086									
				TD	0600		116	355		271			0514				050									
	184	4	08		0686		996	353		272		501	~ J 1 4	00	,		020									
	• 5			ΤD	0700		976	353		272		000	9403	099	9		015									
			_	TD	0800		842	352		274			8305				980									
	184	4	08	_	T0848		781	351		274							964									
			5	TD	0900	0	704	351	0	275	1	000	7270	110	5		942									
			S	ΤD	1000	0	590	350	2	276	0	000	6339	12:	4	14	912									
	184	4	OB	S	1046	0	553	349	99	276						149	905									
			_	ΤD	1100		541	350		276			5923			14	909									
				TD	1200		518	350		277		000	5357	13	1		916									
	184	<i>t</i> .	08	c	T1250	0	506	351	0.2	277	77					3//	921									

CE D.	SHIP	LATITUD	E //10		1/10 E	MAR SQU	SDEN IARE	STATION (GMT		YEAR	CRUISE NO.		TOR'S ATION IMBER		EPTH TO TTDM	MAX. DEPTH OF S'MPL'		WAVE SERVAT	IONS	WEA- THER CODE	CLOUD CODES		S	NODC TATION UMBER	
02	YA	3459	NI.		055W	113	4.8	10 31	133	1968	F18	020		10.0	49	11	20	4		×1	8 7			0020	
0 3	I I A	3407	IA I	040	n hand l	1113	WA	4 4	WIND		A .	IR TEMP	P. *C	1	10.	,		] [	1	1 ~ 1	1 6 1 7	ı	1	00201	
							COLOR		SPEEC	BAR MET	U•		WET CO	S. C	95.		CIAL								
							CODE	(m)	FORG	E (mb	e) BU	LB	BULB	DE	PTHS										
								20	519	17	8 22	9	216 8	1	3										
	MESSENGR TIME HR 1/10	CAST ND.	CAR		DEFTH (m)	ı	۳.	s ·4.	SIG	MA-T	SPECIFIC			Μ.		JND	02 ml/	10.		07AL-P yg = a1/1	NO <sub>2</sub> -N ug - a1/I	NO3-N pg - a1/1	\$1 D4-\$1 vg - a1/	рН	S
																				i					$\Box$
			5.1	ro '	0000	. 2	098	3630	2.5	51	0024	816	000	ο '	152	263 '		'	,						
	133		083	5	0000	2	098	36304	25	51					152	263									
			51	T D	0010	2	092	3630	2.5	52	0024	727	002	5	152	263									
	133	i	083	5	0018	2	088	36299	25	53					157	263									
			5 '	TD	0050	2	087	3630		54	0024	637	004	9	153	263									
			5	ΤĽ	0036	2	083	3630	2.5	55	0024	558	007	4		264									
	133		OB S		0040		078	36308		57						264									
			S	T D	0050		(132	3631	25	70	0023	1239	012	2	15	254									
	133		OB S		0062		992	36320		81						245									
				T D	0075		976	3640		91	0021	284	017	8		243									
	133		083		0083		960	36426		97						241									
				T D	0100		887	3640		14	0019	7171	022	8		223									
	133		OBS		0124		808	36377		32	001					204									
			-	TD	0125		806	3638		33	0017		027			204									
	1.00			ID	0150		758	3639		46	001€	3333	031	6		194									
	133	,	OB:		T0162		740	36398		51	0015	012	0.20	-7		191									
	133			T D	0200		729 700	3638		52 5 <b>7</b>	0015	0413	039	1		193									
	100		OB:	TD.	0250		688	36357 3634		59	0015	100	047	-		191 189									
				T D	0300		622	3622		65	0015		055			176									
	133		OB:		T0314		603	36186		67	0014	1442	022	1		172									
	133	,		5 T D	0400		527	3604		73	0014	450	069	Ω		161									
				TD	0500		400	3584		85	0013		083			134									
				TD	0600		230	3561		02	0012		096			091									
	133	ı	08		0607		216	35598		04	0012	. 01	0.0	,		087									
				TD	0700		000	3534		24	0009	967	107	5		023									
	133	3	083		T0743		912	35248		31		, . (, ,	10,	_		997									
				TD	0800		797	3515		42	0008	3171	116	6		962									
				T D	0900		645	3505		55	0006	_	124			918									
	133	}	08		0949		593	35023		60						905									
				TD	1000		577	3504		64	0009	979	130	4		907									
				TD	1100		545	3509		71	0005	358	136			912									
	133	3	08	S	T1142	0	532	35104	4 27	74					14	913									

						, ,					-						_		MAX.									7
REFERENCE	SHIP	LATITU	ne l	LON	GITUGE	F 20	MAR	SDEN	STATIC G)	N TI		YEAR			ATOR'S			PTH TO	DEPTH	0.0	W.	A VE	WEA	CLOUE			NODE	
CODE NO.	COOE	•	1/10		1/10	트립	10"		MO TO				CRUISE		HOITAT	1		MOT	OF S'MPL"			त स्ट्रा	0000				IU M BER	
211202	V.	2151	-	04				1 1				040	510	0.0	,		. 7	20		1					1		0000	
311383	TA I	3454	N I	04	754 W	1 1	113	47 WA	11 0	_	27 1 INO	968	E18	AIR TE			47		14	27	٦ 4	3	¥ 2	8 8	1		0021	
								COLOR			SPEED	BARO		ORY	WET	VIS.		es.	SPE	CIAL ATIONS								
								COOE	(m)	OIR	PORCE	(mbs		ULE	BULB	1000	DEF	PTHS	OBSERV	A HONS	'							
										23	506	159	) 2	04	183	8	1.	4			1							
									-		1				_		1				1				1	T	1	
	MESSENGE TIME	CAST	CAR		OEPTH	lm)	T	7	5 .	۷.	SIG M.	A-1	SPECIFIC	C VOLU	<u>ه</u> ! و	YN. A	١.	VELO.		0 2 ml/		PO4-P µg = 61/1	101AL-1	NO2-N	NO3-N			č
	HR 1/10	4					_		-		-	_				X 103	+		-		-1.		74		94 - 60	pg - uii	-	-
				- 1							1						ļ									1		
				T D	000			110	362		254		002	540	3 0	000		152										
	12	7	083		000			110	362		254							152										
			-	ΤO	001			109	362		254			540		025		152										
				10	002			108	362		254		002	541	3 0	051		152										
	12	7	OB:		002		_	108	362		254							152										
				D	003			108	362		254			542		076		152										
		-		TD	005		_	091	362		255		002	500	3 0	127		152										
	12		OB:		005		_	091	362		255							152										
	12	1	OB:		007			036	363		256		002	215	2 0	107		152										
	10.	-		TD	007			027	363		257		002	315	3 U	187		152										
	12	1	OB:		009		_	859	363		261		001	861	2 0	220		152										
			-	T D T D	010			855	363 364		262 263			728		239		152										
	10	,		-	012			814					001	120	0 0	284		152										
	12	,	OB:	ĪΩ	014			783 780	364 364		264 264		001	641	<b>.</b> 0	326		152										
	12	7	0B:		T019			730	363		265		001	041	9 0	520		151										
	12	,		Tp	020			724	363		265		001	571	0 0	406		151										
				To	025			666	363		266			505		483		151										
	12	7	OB:		028			626	505	-	200	_	001	, 0 ,	0 0	702		1,71	.02									
	12	'		T D	030			618	362	4	266	8	00.1	470	7 0	558	ł	151	175									
	127	7	OB:	-	037			545	360		267							151										
	•			ĪD	040			507	360		267		001	409	8 0	702		151										
				ΤĎ	050			333	357		269		001	263		835		151										
	12	7	OB:	5	054	8	1	246	356	49	270	2						150	880									
				TD	060	0	1	140	355	1	271	2	001	103	2 0	954		150	159									
			S	TD	070	0	0	950	352	8	272	7	000	954	1 1	057	7	150	004									
	12	7	OB:	S	071	9	0	916	352	48	273	1						149	994									
			S	ΤD	080	0	0	762	351	1	274	4	000	791	8 1	144	•	149	948									
	12	7	083	S	T089	7	0	630	350	23	275	5						149	911									
				I D	090			629	350		275			668		217		149										
				ΤD	100			598	351		276			586		280		149										
				ŧD	110			564	351		277	-	000	522	3 1	335		149										
	12	7	OB:		113			551	351		277							149										
			-	TD	120			527	351		277			483		385		149										
		_		TD	130			486	350		277		000	474	5 1	433		149										
	12	7	QB:	5	T138	1	0	450	350	32	277	В						149	919									

CE	SHIP	LATITU	DE	LONGITUD	£ 15	DCT	MARS	DEN	STAT	ION TH		YEAR		SINATI		T	DEPTH TO	MAX. DEPTH	08	WAVE SERVATION	ONS	WEATHER		OUD		,	NDDC	
D. O.	CDOt		1/10		/10 B	3	10*			AY H			CRUISE NO.		TIDN MBER	8	DITOM	S'MPL"	1	HGT PE		CDDE	1 .	AMI	1		UMBER	
-	V.	2506				٦,		1		-		040	510 0			١,	201	15	1		8	X1	_	3			2022	
8 3	YA ]	3506	N 1	04807	2 W	1.	113	WAI			100 100	968 T	1 410	22 TEMP.	4	4	206	15	30		8	LVI	1 8	13	1	, ,	0022	
								COLOR	_	-	SPEED	METE	l			IS.	ND. DBS.	SPE	CIAL									
								CDDE	(m)	DIR.	POICE	Imbe			ULB		DEPTHS	003544	~ IIDI43									
										30	524	130	200	) ]	157 8		14											
-	MESSENGE	T							1						5 /		T			1.0								Ţ,
- 1	TIME	CAST	Ç AR TYPI	DEP	TH (m)	,	1	τ.	2	٠/	SIGM	A=T	ANDMALY		DYN.	м. 3		JND	D <sub>2</sub> ml/	PD4		01AL-P	NO:		NO3-N	SI D 4-Si ya - a1/I	рН	100
	HR 1/10					-			-			-			+-^'		-	-		+	-		<u> </u>					+
1		1					_	0.05	1			. !	000.								- 1		Į					1
			ST		000			095	362		255		00248	346	000	0		262										
	190	,	OBS		000		_	095	362		255		00246		00'			262										
			5 T		010			094 093	362		255 255		00248		003			263										
	100	,	ST		_		_	093	362		255		00248	92	00:	0		265										
	190	,	0BS		30			093	362 362		255		00249	24.2	00.	, E		265 266										
	190	,	085		348		_	094	362		255		00245	· - 2	00	,		269										
	1 70	,	ST		50			084	362		255		00248	887	012	) <u>L</u>		267										
	190	)	OBS		73		_	977	362		257		00240	, , ,	C L			242										
	1,0		ST		75			969	362		258		00221	22	018	13		240										
	190	)	085		96			890	363		261		.0222					223										
	• / -		5 T		00			<b>B</b> 75	364		261		00188	379	02	3 4		219										
			5 T		125		_	794	364		263		00168		02			201										
	190	)	085		143			751	364	21	265							191										
			5 T	0 0	150		1	743	364	1	265	1	00158	37	033	0	15	190										
	190	)	085	T0:	192		10	696	363	136	265	7					15	182										
			ST	D 0:	200		10	686	363	32	265	8	00153	342	039	8	15	180										
			S T		250		16	621	362	0.0	266	4	00149	04	04	4	15	167										
	190	)	085		88			573	361		266							158										
			5 T		300			558	360		267		00144	66	054	7		155										
	190	)	085		386		_	450	359		268							132										
			ST		400			440	359		268	_	00136	_	068			131										
	100		ST		500			335	357		269		00129	166	08	0		111										
	190	,	OBS		78			212	355		270		00110		0.0	0		081										
			51	_	700			149	355 352		271		00110		094			062										
	190	,	5 T 0 B S		772			897 753	351		273 275		00089	11	10	, 7		9 <b>8</b> 5 940										
	190	,	ST		300			709	351		275		00069	14.7	111		_	927										
			51 5T		900			581	350		276		00058		111			927 892										
	190	,	085		967			520	350		276		20036	,50	11,			878										
	. / (		ST		000			515	350	-	277		00052	35	12	16	-	882										
			ST		00			497	350		277		00048		128		-	892										
			ST		200			477	350		277		00045		13:			900										
	190	)	085		217			473	350		277					_	_	902										
			ST		300			454	350		278		00044	59	13	8		907										
			51		00			430	350		278		00045		142			914										
	190	١.	OBS		70			412	349	81	277							917										

REFERENCE	SHIP		-:	MARSDEN	STATION	YILLE		2000				44.4.	_								
CTRY ID.	CDDE	LATITUDE	LONGITUDE	SOUARE	IGMI	TIME YEA		DRIGIN	TATION	-	DEPTH	MAX. DEPTH	. [		A TION		√ξA-	CLOUD			NODC
	+	1/10	1/10	10, 1,	MO DAY	HR.1/10	NO.		UMBER		BOTTON	S'MPL'			T PER	1 4	HER DDE	TYPE AM	1	5	TATION
311383	B YA	3507 N	04802 W	113 58	11 03	138 196	8 E 18	0.2	2		3420	14	1		1		_		-		
				W	ATER	WIND I		IR TEA		T-1	1	14	25	7	1 1	4   X	(1	6 6	1		0023
				COLO	R TRANS DIR	SPEED A	ETER (	ORY	WET	CODE	NO. OBS.		CIAL								
				000	+	PORCE	mbel 8	nre	BULB		DEPTHS		- HOM	,							
					25	520 1	67 2	11	172	8	13										
	MESSENGE TIME 0	CAST CARE		1 7	5 %.	SIGMA-1	, SPECIFIC	VOLUA	. 1	Δ D.	SOUR	un		1			1				
	HR 1/10	1176				SIGMA-1	ANOM	ALY-X10	, DYI	N. M. 10 <sup>3</sup>	VELDO		D 2 ml		D4=P g = e1/I	TOTAL		NO2-N	NO3~N	SI Da-Si	рн
									-	-	+	-		-		-	-		µg - 01/1	¥9 - 01/1	
		ST	0000	2092	3630	2552	0024	. 4 0 4	1	00		!		-						1	
	138	085	0000	2092	36299		002	+070	00	00	152										
		ST	D 0010	2091	3630	2552	0024	. 713	20	2.5	152										
		ST		2090	3630	2553	0024				1526										
	138	085	0024	2090	36298	2553	0021	133	00	44	1526										
		S T (		2090	3630	2553	0034	70,	0.0	7.	1526										
	138	OBS	0048	2091	36291	2552	0024	184	0.0	14	1526										
		ST		2061	3630	2561	0024	071			1526										
	138	085	0072	1824	36346	2626	0024	010	01	23	1526										
		STO	0075	1814	3636	2630	0017	411	0.1	7.5	1520										
	138	085	0095	1763	36399	2645	0017	014	01	15	1519	_									
		ST		1760	3640	2646	0016	2 - 1	0.0		1518										
		STO		1742	3639	2650	0016		02		1518										
	138	OBS	0143	1727	36384	2653	0015	014	0.2	5/	1518										
		STO		1720	3637	2653	0015	E O /.	0.74	0.7	1518										
	138	085	T0192	1678	36299	2658	0015	J 74	0.2	9 1	1518	_									
		SID	0200	1669	3628	2659	0015	24.4	0.3	7,	1517										
		STD	0250	1613	3619	2665	0014	-	03		1517										
	138	085	0287	1572	36126	2669	0014	140	044	49	1516										
		STO		1559	3610	2670	0014	. 1 6	0.5.5		1515										
	138	OBS	T0384	1469	35957	2680	0014	415	0.52	22	1515										
		STD		1443	3592	2682	0012	E 3 3	0//		1513										
		SID	0500	1282	3571	2700	0013		066		1513										
		STD		1126	3552	2715			079		1509										
		STD		0975	3535	2729	0010		0.90		1505										
	138	OBS	0765	0880	35257	2737	0009	459	100	) 4	1501										
		STD		0819	3520	2742	0008				1498										
		STD	0900	0675	3507	2753			109		1497	-									
	138	08.5	0956	0613	35030		00070	158	116	8	1493										
		STD	1000	0590	3504	2758 2762	0001			-	1491										
		STD	1100	0542	3504	2769	0006		123		1491	_									
	138	OBS	1196	0501	35065	2775	0005	003	129	3	1491										
		STD	1200	0499	3506	2775	0005				1490										
		STD	1300	0461	3505	2778	00050		134		1490										
		STD	1400	0428	3503	2780	00046		139		1491										
	138	OBS	T1424	0421	35019	2780	0004	006	144	0	1491										
				V 7 6 1	フノロエザ	/ / MU					14914										

RENCE IO.	SHIP	LATITUO	DE LOP	ACITUOE PO	MARSOEN SOUARE	STATION TIN	YEAR	ORIGINATO CRUISE STAT	ION	OEPTH TO SOTTOM	OEPTH OF	OBSE	RVATIONS	WEA- THER CODE	CODES			ON TAT
NO.	COOE	•	1/10	1/10 E	10, 1,	MO DAY HE		NO. NUM	#£#		S'MPL"	+	GF PER SE	^+-	1171 2.00	_		_
1383	YA	3502	N 04	800 W		11 04 1		E18 024	l	3876	16	27	4  3	X1	8 2	1	l	00
					COLOR	TRANS. DIR.	SPEED METI	ER ORY W	78 8	NO. OBS. OEPTHS	SPE OBSERV	CIAL						
	MESSENGR TIME G	CAST NO.	CARO TYPE	OEPTH (m)	1 %	s ·/.	SIGMA-T	SPECIFIC VOLUME ANOMALY-X107	₹ △ D OYN. M X 10 <sup>3</sup>	SOU VELC		02 ml/l	PO4=P ug = a1/1	101AL-P µg - 01/1	NO2-N vg + at/1	NO3-N ug - 01/1	\$1 O4=\$ µg + 01/	
			STD	0000	2090	3629	2552	0024731	0000	152	261		1	1	ı	l		1
	120		OBS	0000	2090	36287	2552			152	261							
	128		510	0010	2088	3629	2553	0024710	0025	152	262							
			STD	0020	2087	3629	2553	0024722	0049		263							
	128	,	OBS	0027	2086	36289	2553			152	264							
	120	,	SID	0030	2086	3629	2553	0024729	0074	15	264							
			STO	0050	2087	3629	2553	0024853	0124	15	268							
	128	1	OBS	0054	2087	36284	2552			15	269							
	120	,	STD	0075	1868	3633	2614	0019128	0179	15	213							
	128		OBS	0081	1826	36343	2625			15	202							
	120	,	STD	0100	1770	3639	2643	0016443	0223	3 15	189							
	128	1	OBS	0108	1752	36398	2648			15	185							
	120	,	SID	0125	1740	3639	2650	0015828	0264	15	185							
			STD	0150	1718	3637	2654	0015548	0303		182							
	128	3	OBS	0162	1706	36352	2655				180							
			STO	0200	1658	3628	2661	0014995	0379		171							
	128	3	OBS	T0217	1638	36242	2663				167							
			STO	0250	1612	3619	2665	0014776	0454		164							
			STO	0300	1565	3610	2669	0014546	052		157							
	128	8	OBS	0326	1538	36050	2671				152							
			STD	0400	1447	3591	2681	0013688	066		134							
	128	В	085	T0435	1400	35844	2686				123							
			STD	0500	1249	3567	2703	0011694	079		082							
			SID	0600	1042	3544	2724	0009758	090		973							
			ST0	0700	0868	3526	2739	0008320	099	_	934							
			STD	0800	0725	3513	2751	0007207	107	-	913							
	124	8	OBS	0869	0645	35064	2757	0006365	113	-	907							
			STD	0900	0617	3505 3503	2759 2767	0005572	119		892							
		_	STO	1000	0540 0496	35015	2771	3003312	117	_	886							
	12	B	OBS	T1075 1100	0496		2772	0005150	125		888							
			STD	1200	0463	3501	2775	0004914	130		894							
			STO		0463	3501	2777	0004714	135		901							
		0	SID	1300 1360	0441		2778	3004120	100		907							
	12	В	OBS	1400	0430		2779	0004622	139		910							
			STD	1500	0423		2780	0004531	144		921							
	1.7	0	STO OBS	T1633	0395		2782	200.234	• •		938							
	12	o	083	11000	U 5 7 7	22004	2102											

10. NO.	SHIP	LATITU	- 1	LON	GITUOE	DRIFT	MARS	ARE	STATION	)	YEAR	CRUISE	INAT	OP'S	DEPTH TO	MAX DEPTH OF	08	WAVE SERVATIO	N\$	WEATHER			,	NODE	
-			1/10		17.10		10°	1-	MO DAY	HP.1/10		NO.	NU	MBER	BOTTOM	S'MPL"	S CIR.	HGT PER	SEA	CODE	THE AS	77	1 1	NUMBER	
383	YA	3458	N	04	758 W	1	113		11 05	122	1968	E18 0	25		4389	15	28		2	¥ 1	8 6			0025	
								WA	T E R	WIND	BAR	O- AIR	TE AA P	. °C VIS	NO.		CIAL	i		_	- 0	,		002	
								COLOR	TRANS DIR	SPEED OR FORCE	M ET			WET COD	OBS. OEPTHS	OBSERV									
-		, ,							31	517	30	8 200	1	185 8	13										
[-	MESSEN GR TIME	LCAST	CAR		OEPTH (	_,		*c				SPECIFIC VO	LILME	₹ ∆ D DYN. M	1 501	JND							Τ	ĭ	1.
- 1	HR 1/10		TYP	۱ ا		``'			\$ 14.	2104	V A - T	ANOMALY-		1 10 <sup>3</sup>	VELO	CITY	0; m1/	PO4-1		3 - 01/1	NO2-N #g - d1	NO3=N	51 24-51 29 + 91/1		Ĉ
						_			<u> </u>	-			_	1		-			-		-	by . ar .	29 - 9/21	1	C
- 1		' '	ST	' ח	0000	,	20	88	3629	255	5.2	003/4	7 7	0000	1								1	,	1
	122	•	085		0000			88	36288	255		00246	12	0000	152										
			ST		0010			87	3629	255		00347	٠,		152										
			ST		0020			186	3629	255		00246		0024	152										
	122	•	085		0025			186	36290	259		0024B	7.3	0049	152										
			ST		0030			86	3629	255		002474	4.0	0074	152										
	122		OBS	_	0049			187	36286	255		002476	4 0	0074	152										
			ST		0050			78	3629	255		00246	2 /.	0122	152										
	122		OBS		0073			12	36292	259		00240	Z <b>4</b>	0123	152										
			ST	D	0075			02	3630	260		00202	10	0179	152 152										
	122		085		0097			16	36345	262		00202.	10	0114											
			ST	D	0100	1		11	3635	263		001768	9.2	0226	152 152										
			ST	D	0125			71	3639	264		001652		0269	151										
	122		085		0144			46	36404	265		00.10.72		17207	151										
			ST	D	0150		17	42	3640	265		001586	9	0310	151										
	122		085		T0194		17		36346	265			,	0310	151										
			ST	Ð	0200		16	97	3633	265		001549	75	0388	151										
			ST	D	0250		16	39	3624	266	3	001503	-	0464	151										
	122		085		0287		15	95	36165	266	7				151										
			ST		0300		15	80	3614	266	9	001461	0	0539	151										
	122		085		T0378		14	85	35982	267	8				151										
			ST	_	0400		14	50	3591	268	0	001372	4	0680	151										
			ST	_	0500		12	91	3564	269	2	001273	19	0813	150										
			ST		0600		11		3541	270	6	001153	8	0934	150										
			ST	D	0700		09		3523	272	1	001012	3	1042	150										
	122		085		0755		0.8																		
			ST		0800		07		3510	274		000815	5	1134	149	53									
			ST	_	0900		06	-	3502	275		000638	13	1206	149										
	122		OBS		T0948		0.5		35003	276					148	86									
			SI	_	1000		05		3502	276		000564		1266	148	92									
			STO		1100		05		3505	277		000530		1321	149	01									
	122		ST(	)	1200		05		3508	277		000490	3	1372	149	10									
	122		085		1203		04		35079	277					149	10									
			STO		1300		04		3507	277		000475		1420	149										
	122		STO		1400		04		3503	277		000473	2	1468	149	20									
	122		085		11463		04	25	34995	277	8				149	22									

Table XIII.—Observed and interpolated occanographic data for stations taken by USCGC MCCULLOCH at Ocean Station ECHO, 6-25 November 1968, prepared from NODC listing No. 31-1385

RE	FERENCE	-	Ţ			_ 5		SOEN		TION T	IME			DRIGINA	ATOR'S	Ĩ	DEPTI	MA MA		WAV		WEA-	CLOUD			1000	
CTI	ır ID.	CODE	LATIT	UDE	LDN	GITUDE E	300	ARE		(GMTI		YEAR	CRUISE		TATION		10 80110	DEP1	F I J	8SERVA1	TIONS	THER	COOES	1	5	UMBER	
COI	NO.		<u> </u>	1/10		1/10	10*	1.	MD	DAY	R.1/10		NO.	N	UMBER	_	10110	M S'MP	L'S DIR	HG! P	ER SEA	CODE	TYPE AM	7		UWBEK	
3	11389	5 ML	345	7 N	047	758 W	1113	47	11	06	122	1968	E19	001	l		429	7   16	5   17	4 3	,	×1	3 3			0001	
								WA			VIND	BAR		AIR TEA	AP. C	T	NO.	1		٦' '	,	, -		•	,		
								COLDR	TRANS	OIP.	SPEED	MET	ER (	DRY	WET	CODE	OBS.	OBSE	PECIAL RVATION:	5							
								CODE	(m)	OIF.	PORC	( (mb	1 8	ULB	SOFS		DEPTH	15									
										16	512	13	5 2	06	178	7	14										
		MESSEN		T			1		1		<b>-</b>					Λ.Β.	<del>    -</del>			<del>*</del> —	-			1			7.7
		TIME	CAST	CA	P D	DEPIH (m)	1	*C	S	•/	SIG	MA-T	SPECIFIC	ALY-XIG	ME 5	M. A	.   \$	LOCITY	02 ml			TOTAL-P	NO2-N	ND3-N	5104-50	рН	è
		HR 1/1							_				-		_	x 103			1	ν.	• 01/1	µg - o1/l	μg = 01/1	pg - a1/1	PQ - 01/1		c
					1		i												1		1						
				5	TD :	0000	2	108	36	32	25	49	002	4982	2 00	000	1 5	5266									
		12	2	οв.	S	0000	2	108	36	317	25	49					1 5	5266									
				5	TD	0010	2	108	36	32	25	49	002	5013	3 00	025	1 5	5267									
				5	TΟ	0020	2	108	36	32	25	49	002	5043	3 00	050	1 5	5269									
		12	2	08.	S	0025	2	108	36	319	25	49					1 5	5270									
					TD	0030	2	108	36	32	25	49	002			375	15	5271									
				S	ΤD	0050	2	108	36	32	25	49	002	5157	7 0	125	1 5	5274									
		12	2	OB:	S	0050	2	108	36	319	25	49					15	5274									
				5	TΟ	0075	1	827	36	34	26	25	001	8069	9 0	179	1 :	5201									
		12	2	08:	S	0076	1	820	36	345	26	27					1 5	5199									
				5	TD	0100	1	752	36	37	26	45	001	6189	9 0	222	1 5	5184									
		12	2	OB	5	0101	1	750	36	368	26	46					1 9	5183									
				S	TΟ	0125	1	723	36	35	26	51	001	5724	0	262	1 5	5179									
				5	TD	0150	1	698	36	33	26	56	001	5378	3 01	301	1 5	5176									
		12	2	08	S	0152	1	696	36	324	26	56					15	5175									
				5	TD	0200	1	655	36	26	26	61	001	5072	2 0	377	15	5170									
		12	2	08		10203	1	652	36	251	26	61					1 5	5169									
				5	TΟ	0250	1	611	36	19	26	65	001	4754	0	452	1 5	5164									
					TD	0300	1	557	36	10	26	71	001	4371	0	524	1 5	5154									
		12	2	OB.	S	0309	1	546	36	081	26	72					15	5152									
				5	T O	0400	1	413	35	85	26	83	001	3413	3 06	563	1 5	5122									
		12	2	OB.		T0417	1	386		811		86					1 5	5116									
					TD	0500		223	35			01	001			790		5072									
				_	T D	0600	_	047	35			18	001	0359	9 0	901	1 :	5024									
		12	2	08		10628		001		325		22						5011									
					TO	0700		886	35			36	000			996	_	4980									
					TΟ	0800		753	35			51	000	7193	3 10	75		4945									
		12	2	08		0841		707		161		56						4934									
					TD	0900		658	35			61	000			142		4924									
				_	TD	1000		584	35			67	000	5667	7 1	202		4911									
		12	2	90		1055		549		084		70						4906									
					TD	1100		538	35	-		71	000		-	257		4908									
					TD	1200		513	35			73	000		_	309		4915									
					TO	1300	0	488	35		27	75	000	5034	4 1	360	14	4921									
		12	2	ОВ		1325				051																	
					TD	1400		463	35			77	000		-	410		4927									
			_		TO	1500		438	35			78	000	4809	9 1	45B		4934									
		12	2	08	5	T1595	0	414	35	001	27	79					14	4939									

REFERENCE					1																				
CTRY ID.	SHIP	LATITUE	ie l	ONGITUDE	MARS		T MOITATZ	IAA E	YEAR			ATOR'S		DEFTH	DEPTH	. 1	ORSER	VAVE		WE		LOUD			NODC
001 NO.	2007	·	1/10	1/10	10*	1.	MO DAY H	R.1/10		CRUISE		HOITATZ REBANUN	- 1	BOTTOM	OF S"MPL"	1		GT PEI		THE	36	CODES			TATION UMBER
311385	ML	3453	N 0	4802 W	113	48	11 07	134	1968	£19	00	2		4755	14	1	0 4		- 3.67	×ε					
						WA	ER V	VIND	BAR	1		MP. °C		NO.			<u>ښ</u> اح	1-4	1	^0	1	6 8	I	1 1	0002
						20102	TRANS DIR.	SPEED	13M	ER [	RY	WET	COD!	OBS.	OBSERV	CIAL	NS								
					-	CODE		FORCE	(mb		ULB	\$ULB	-	DEPTHS											
Г		1					23	507	07	1 2	11	194	7	14											
	MESSENGR TIME 0	CAST NO.	CARD	DEPTH (m)		~	s ·/	SIGA	4A-T	SPECIFIC	volu	ME 3	A D	SOL	JND	_		PO.	_ P	TOTAL-	P N	D2=N	NO <sub>1</sub> -N	SI D4-5:	
	HR 1/10		1176		1			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		ANDM	ALT-XI		x 10 <sup>3</sup>	VELC	CITY	02	7//	P0 - 0		#9 - 01/		· 01/1	μg + α1/I	ug - a1/1	рН
																					+-				
			STD	0000	21	0.0	3631	255	1	0024	846	5 <sup>'</sup> 0	000	152	63		J				1	I			
	134		OBS	0000	21	00	36307	255	1			-		152											
			STD	0010	21	0.0	3631	255	1	0024	884	4 0	025	152											
			STD	0020	21	00	3631	255	1	0024	915	5 0	350	152	67										
	134		OBS	0025		00	36308	255	1					152											
			STD	0030		0.0	3631	255		0024	952	2 0	75	152	268										
	134		OBS	0048		0.0	36308	255						152	271										
	134		STD	0050		78	3631	255		0024	442	2 0	124	152	66										
	134		OBS	0073		76	36326	261						152	14										
	134		STD	0075		65	3633	261		0019	055	0	178	152											
	134		OBS STD	0097	_	75	36395	264						151											
			STD	0100 0125	17	_	3640	264		0016			223	151	-										
	134		OBS	0144	17 17	-	3642	264		0016	241	. 0	264	151											
			SID	0150	17		36437 3642	265		0016				151											
	134		OBS	70192	16		36313	265 265		0015	812	2 0.	304	151											
			STD	0200	16		3630	265		0015	227	,	102	151											
			STD	0250	16		3621	266		0014	_		882 57	151											
	134		OBS	0283	15		36145	266		3014	052	. 0.	10	151 151											
			SID	0300	15		3610	267		0014	437	, 01	30	151											
	134		OBS	T0371	14	71	35942	267			7).	0.	,,,	151											
			STD	0400	14	_	3588	268		0013	654	0.4	71	151											
			STD	0500	12	-	3567	269		0012			102	150											
	134		OB S	T0565	11	98	35547	270	4				_	150											
			STD	0600	11	31	3548	271	1	0011	083	0.9	21	150											
			STD	0700	0.9	49	3531	273	0	0009	305		123	150											
	134		OBS	0745	0.8	71	35243	273	7			-		149											
			STD	0800	07	63	3515	274	7	0007	640	1.1	0.8	149											
			STD	0900	06	13	3503	275	8	0006	455	11	78	149											
	134	(	DBS	T0932	05		35006	276	1			-		148											
			STD	1000	056	-	3504	276		0005			40	149	01										
	124		STD	1100	05:		3507	277		0005	319	1.2	95	149	07										
	134	(	DBS	1182	05		35082	277						149	11										
			STD	1200	0.50		3508	277		00C4			46	149	11										
			STD	1300	04		3506	277		0004			95	149	15										
	12/		STD	1400	043		3502	277		0004	699	14	42	149	16										
	134	(	DBS	T1437	042	23	34994	277	A .					149	17										

	SHIP	LATITU	DE 1/10	LONGITUDE	10°	RSDEN DUARE	STATION (GMT	TIME YEA	AR C		ATOR'S FATION NUMBER		DEPTH TO BOTTOM	MAX, DEPTH OF S'MPL'	0	WAV ISERVAT	E TIONS ER SEA	WEA- THER COOE	CLOUE	S		NODC STATION NUMBER
185	ML	3457	N	048125W	11	3 48	11 08	123 19	68	E19 00:	3	4	4480	15	05	2 5		X1	6 5			0003
اردور		3451	14	040123#	12.2	WA		W1NO T		1 AID 751			NO.			7	'	1 ~ 4	1015	1	1	0000
							1	SPEED	BARO-	ORY		VIS ODE	OBS.		CIAL VATIONS							
						CODE	Imi DIR.		(mbs)	BULB	BUL8		DEPTHS	OBSERT	, , 110113							
							06	514	213	183	139	7	14			1						
Г							4	-	-				T1			4-						1
^	AESSENGR TIME	CAST NO.	CAR		m)	7 ℃	5 14.	SIGMA-		ANOMALY-KI	n7 DIN	. M	SOU VELO		02 ml/			TOTAL=P	NO2-N	NO3-H		
1	IR 1/10		1111								x	103	VELC	,,,,,,,		, Br	01/1	νg - σ1/1	µg - at/	µg = ot/1	µg = 01/	1
									ł												i	
1		' '	ST	0000	)	2089	3632	2554	. (	002448	B 000	00	152	61		'	,			,		
	123	3	083	0000	) .	2089	36317	2554					152	61								
			ST	0 0010	)	2089	3632	2555	(	002451	5 00:	25	152	62								
			ST	0 0020	)	2090	3632	2554	(	002456	3 00	49	152	264								
	123	)	OBS			2090	36323	2555					152									
			ST		)	2090	3632	2554	(	002461	3 00	74	152	266								
	123	3	OBS	0047	,	2091	36319	2554					152	269								
			SI	D 0050	)	2091	3632	2554	(	002470	1 017	23	152	269								
	123	)	085	0071		2087	36319	2555					152	72								
			51	0 0075	,	2026	3633	2572		002305	5 016	3	152	256								
	123	,	085	0094	•	1801	36351	2632					151	97								
			ST	D 0100	)	1792	3635	2634	(	001723	7 02	33	151	95								
			ST	0 0125	,	1755	3636	2644	(	001642	4 02	75	151	189								
	123	3	083	0142	2	1731	36358	2650					151	84								
			ST	0 0150	)	1721	3635	2652		001576	2 03:	15	151	183								
	123	3	085	T019		1670	36277	2658					151	173								
			ST	D 0200	)	1659	3626	2660		001516	3 03	93	151	171								
			ST	0 0250	)	1599	3616	2666		001470	4 046	57	151	160								
	123	3	OBS	0287	,	1551	36081	2671					151	150								
			ST	O 0300	)	1533	3605	2672		001421	1 054	+0	151	46								
	123	3	OBS	0383	3	1418	35859	2683					151	21								
			ST	0 0400	)	1395	3582	2685	-	001325	8 06	77	151	16								
			ST	-		1258	3562	2698	1	001223	4 080	) 4	150	84								
	123	3	OBS			1148	35480	2708					150	58								
			ST			1116	3545	2711		001102			150									
			ST			0968	3530	2726	-	000970	3 10	24	150									
	123	3	088	-		0862	35210	2736					149									
			ST			0802	3516	2742		000817			149									
			ST	-		0637	3503	2755		000679	7 11	9	149									
	123	3	OBS			0562	34986	2761					148									
			SI			0548	3500	2764		000590			148									
			ST	_		0513	3503	2770		000532			148									
			ST			0482	3503	2774	1	00050 <b>2</b>	1 136	50	149									
	123	3	085			0479	35034	2775					149	_								
			SI			0455	3503	2777		000476	_		149									
			ST			0433	3500	2777		000479	2 14	57	149									
	123	3	OBS	T1460	)	0421	34976	2777					149	919								

FERENCE IT ID. NO.	SHIP	LATITUDE 1/10		ONGITUDE 100		SDEN ARE		TION T		YEAR	UK	ORIGI UISE	NATO STAT NUN	ION	DEPTO	AA O	TH		WAVE SERVATIO		THER			Ţ	NODC STATION
1138	5 ML	35015N	0.4	4809 W	113	58		-	-		-+-		_	.00.1	-	5'M	PL*S	DIB	HGT PIR	SEA	CODI	TIPE AN	1		NUMBER
				.007	1113	_	11			1468	3 E	19 00			4023	1	7	12	4 2		X 2	3 8			0004
						COLOR	1	<del>  '</del>	SPEED		RO-	A IR T	_	- VIS	NO,	5	PECIA	,							0004
						CODE	(w)	DIR.	FORCE	141.6		DRY		ET COD	DEPTH	0.000	RVATI	ONS							
								19	522	14	. 6	217	+	7 7	1	+									
	MESSENGE	CAST	ARD		Ţ		-	-	1000	1			-		14										
	TIME HR 1/10	9! NO   +	YPE	DEPTH (m)	1	°C	S	٠	SIGA	AA-T	SPE	CIFIC VOL	U M E	E A D	36	UND	0.0	m1/1	PO <sub>4</sub> -	P 10	DTA L-P	NO2-N	NO3-N	5104-	
	718 1710			-	-				-					¥ 10 <sup>3</sup>	VEI	OCHY			µg - a!		3 - 01 1	ug = a1/1	µg - α1/1		
		1 1	TD	2200																					+
	121			0000		179	363		25€		0.0	2399	1	0000	15	258			,						
	16.		TD	0010		79	363		25€						15	258									
			TD	0020		79	363	-	255			2404		0024	15	260									
	121			0027		080 080	363		255		0.0	2409	2	0048	15	262									
			To	0030		77	363		255				_			263									
			TD	0050		31	363 362		256			2411		0072		263									
	121			0054		16	362		256 257		UU	2335	8	0120		253									
			TD	0075		89	363		260		0.0	11056				250									
	121	OB	S	0082		56	363		261		00	1956	6	0173		219									
		S	TO	0100		99	363		263		00	1719	0	0210		211									
	121	08	S	0110		74	363		264		00	11119	4	0219		198									
		5	TD	0125		64	364		264		0.0	1633	n	0261		192 192									
			ΤO	0150	17	45	364	0	265			1594		0302		192									
	121	08:		0165	17	32	364	0.2	265				_	.,/02		189									
			TD	0200	16	95	363	4	265		00	1540	3	0380	15										
	121	OB:		T0551		72	363	04	266	0						179									
			TD	0250	16		362	5	266	3	00	1499	1	0456	15										
	121		TD	0300	15		361		266	Q	00	14551	3	0530	15										
	121	083		0328	15		360		267	2					15										
	121		FD	0400	14		359		268		00	13562	2	0670	151										
	1 2 1	083	o To	T0428	13		358	-	268						151	21									
		51		0500 0600	12		356		270		0.0	12014	+	0798	150	79									
	121	085	_	T0647	10		353		271		00	1053	7	0911	150	28									
	161	51		0700	09	-	352		272						150	0.7									
		51		0800	09 07		352		273			00110		1000	149	90									
	121	083		0872	07	-	352		274		000	07742		1094	149										
		51		0900	06		3516 3519		275						149	_									
		S T		1000	05		3509		2751			06619		1165	149										
	121	085		1095	05		350		2766		000	05825		1228	149										
		ST		1100	05		3506		2777		001	2522		200	149										
		ST	D	1200	04		3505		2775			95 <b>236</b> 95000		1283	149										
		ST	D	1300	04		350		277			04801		334 383	149										
	121	085	,	1381	04		3504		277		500	-+001		1000	149										
		ST	D	1400	044		3504		2779		000	4660	1	430	149	_									
		57		1500	04		3503		2781			14535		476	149										
	121	085		T1678	031		3498		2780		4			7,0	149	20									

DEFENSACE	TT							_	ONCO	1 4 7 0 0 0	. 1		MAX.			- 1					
CIRY ID.	SHIP	LATITU	DE LO	NGITUDE POLITION	MARSDEN SQUARE	STATION TI	ME YEAR			STATIO		DEPTH	DEPTH	085	WAVE ERVATION	5	WEA-	CODEZ	1	١,	NODC TATION
NO.	CODE		1/10	1/10	10" 1"	MO DAY H		p. r		NUMBE		BOTTOM	S'MPL'S	)	HGT PER	- 1	CODE	TYPE AM			UMBER
311385	ML	3507	N 04	759 W			34 196	8 E	19 00			2834	17	22	2 3		×1	2 2			0005
					WA			4 RO-		MP. °C	- UIS	NO.	SPE	CIAL							
					COLOR	TRANS. DIR.	I OR I .	ETER nbs)	DRY BULB	BUL	COD	OBS. DEPTHS	OBSERV	A TION S							
					0001	27	FORCE		+	-	-	1	-								
						27	313 1	86	211	18		14	L		7						
	MESSENGE TIME 0	CAST	CARD	DEPTH (m)	1 10	5 %.	SIGMA-T		ECIFIC VOL	IME	₹ A D	501	DNC	O2 m1/1	PO4~P		TA L-P	NO2-N	NO3-N	\$104-50	рН
	HR 3/10	NO.	TYPE						NDMALY-X	10,	X 103	VELC	OCITY		µg + o1/	P8	1/10 - 6	μg + αI/I	μg - <b>01/</b> ί	Pg - 01/1	, "
																1					
			STD	0000	2002	3619	2568	0	02315	4 (	1000	152	236		1	1				'	
	134		OBS	0000	2002	36194	2568					152	236								
			STU	6610	2002	3620	2569	0	02317	6 (	0023	152	237								
			STD	0020	2001	3620	2569	0	02318	9 (	1046	152									
	134		OBS	0028	2001	36198	2569					152									
			SID	0030	2001	3620	2569		02320		070	152									
			STD	0050	1999	3621	2570	0	02316	8 (	116	152									
	134		085	0054	1999	36210	2570	_	0.00.0			152									
	124		STD	0075	1886	3619	2598	U	02060	1 (	171	152									
	134		OBS	0082	1863	36179	2603	^	01024			152									
	134		STD	0100 0109	1852 1843	3641 36480	2624 2631	U	01824	9 (	219	152 152									
	134		STD	0125	1807	3645	2638	0	01696	0 /	263										
			STD	0150	1759	3641	2647		01621		305	151									
	134		OBS	0163	1739	36387	2650	•	01021		,,,,,	151									
			STD	0200	1706	3634	2655	0	01565	6 (	384	151									
	134		OBS	T0221	1684	36312	2658		••••	•	, , , ,	151									
			STD	0250	1643	3625	2663	0	01503	6 (	0461	151									
			STD	0300	1574	3613	2669	0	01452		1535	151									
	134		085	0328	1536	36068	2673					151	152								
			STD	0400	1444	3591	2681	0	01362	5 (	676	151	133								
	134		OBS	T0436	1391	35826	2686					151									
			STD	0500	1253	3562	2698		01213		805	150									
	12:		SID	0600	1065	3538	2715	0	01060	7 (	918	150									
	134		OBS	T0661	0966	35282	2725		00000	, .		150									
			STD	0700	0917	3527	2732		00903		016	149									
	134		STD	0800 0873	0798 0716	3525 35231	2749 2760	U	00746	۷ :	099	149									
	154		STD	0900	0.680	3519		0	00625	, ,	140	149									
			STD	1000	0568	3507	2762 2767		00625 00566		168 227	149									
	134		OBS	1092	0496	35001	2770	U	00706		221	148									
	1.54		STD	1100	0495	35001	2770	0	00528	9	282	146									
			STD	1200	0480	3502	2773		00508		334	149									
			STD	1300	0465	3503	2776		00488		384	149									
	134		OBS	1368	0454	35042	2778		50			149									
			STD	1400	0449	3504	2779	0	00471	4 ]	432	149	-								
			510	1500	0431	3503	2780	0	00464		478	149									
	134		OBS	T1655	0403	34996	2780					149									

NCE	SHIP	LATITE	LATITUDE 1/10		LONGITUDE		RSDEN	STATION T				ORIGINA		TOR'S	DEFTH	MAX.			WEA-	Cron				
10. NO.	CODE	•					10.00	MOTO	SMT)	P 1 / 10	YEAR	CRUIS		TATION	TO BOTTOM	DEPTH		WAVE BSERVATIONS		THER	CODE	2	5	NODE
385	ML	3457	7 N	048	09 W	111					1968	-	_		-	3 MPL		HGT PER	St A		TYPE As			NUMBER
	-, -, -, -,							TER		/IND		E19	AIR TEM		4572	15	28	4 2		× 1	3 6			0006
							COLOR		DIR.	SPELD	METE		DRY	WET COL	G 085.	SPE	CIAL							
							CODE	Im!		FORCE	(mbe	.}	BULB	BULB	DEPTHS	COSCRE	~ 110143							
			_	-					19	502	244	+ 2	11	194 7	14									
	MESSENGR TIME	CAST	AST CARD		DEPTH (m)		T to	3 %.		SIGMA=T		SPECIFIC VOLU		E S ∆ D	SOL	IND		PO4-P		AL-P				
	HR 1/10	1	177					-	••	3100	,,	ANDA	AALY-X10	7 DYN. A	VELC	CITY	0 2 ml/	μg = 61/		01/1	NO2-N	NO3-N ug - at/1	SI O4-Si 1/10 - Bu	рН
		1														_		_	+	-		<del>                                     </del>		
			STO OBS		0000		2049		0	2564 2564		0023567		0000	15250 15250			1	1	1		į		1
	134						2049	36302																
			51		0010		2047	363	0	256	5	002	3563	0024										
			51				2046	3630		256	5	0023559		0047		252								
	134		OBS		0025		2045	363		256					152									
			ST		0030		031	362		256		002	3313	0071										
	134		51		0050		958	362		258		002	1923	0116	152	33								
	1 34		OBS		0051	_	954	362		258					152	32								
	134		ST OBS		0075		830	363		262		001	7923	0166	152	02								
	134		51		0076		826	363		262					152	01								
	134		085		0101		768	363		264		001	6396	0209	151									
	.,-		ST		0125	_	766 740	3639 3638		264					151									
			ST		0150		715	3636		264			5900	0249	151									
	134		085		0152		713	363		265 265		001	5551	0288	151	-								
			ST	D	0200		672	3628		265		001	5313	0246	151									
	134		OBS	_	0201		671	362		265		001	2313	0365	151									
			ST		0250		617	3619		266		001	4888	0441	151 151									
			ST		0300		556	3609		267			4422	0514	151									
	134		085	085 0305		1	1550 36		13					0214	151									
			ST	D	0400		418	3585		268		001	3517	0654	151									
	134		OBS	T	0404	1	412	3584	1	268				0054	151	-								
			ST	_	0500	1	265	3562	?	269	6	001	2371	0783	150									
			ST		0600	_	113	3545		271			0969	0900	150									
	134		OBS		0610		098	3543		271					150									
			ST		0700		959	3534		273		000	9256	1001	150									
	126		STO		0800		815	3525		274		000	7724	1086	149	70								
	134		OBS		0812		798	3523		274	_				149	65								
			STO		0900		664	3513		275			5456	1157	149	26								
	134		OBS		1000 1015		552	3505		276		000	590	1217	148									
	1.7→		5 <b>T</b> (		1100		539	3503	-	276	_				148									
			5T0		1200		512 483	3504 3504		277			261	1271	148									
	134		085		1269		464	3503		2774		0004	990	1323	149									
			STO		1300		456	3503	9	277		200	770		149									
			STO		1400		431	3501		2771			779	1371	149									
			STO		1500		409	3498		2778			713	1419	149									
	134		OBS		1526		404	3497	1	2778			1 3	1466	1497	_								
								2771	•	- 110	,				149	c 5								

-	ENCE	IP. LATITU	101	LONGITUDE	MAR SOI	SDEN	STATION (GM1	TIME	VEAR		DRIGINA			DEPTH	MAX. DEPTH	085	WAVE ERVATIONS	WEA-	CLOUD			NODC
CODE	ID. COL		1/16	1/16	20 SOI	771	MO DAY		YEAR	CRUISE NO.		UMBER		MOTTOR	0.5		HGT PER SE	CODE	ITPE AM	1		NOITAT
						1				-					1	_			1	+		
31	1385  MI	3501	N I	04758 W	1113	57		130	1968		OO7			4572	17	29	2  2	X.5	166		i	0007
						-		1 196 6	BARC	) <b>-</b> —			VIS.	NO.	SPEC	CIAL						
						COLOR	TRANS. DIR	FOR	1		ULB	WET	CODE	OSS. DEPTHS	OBSERV	ATIONS						
							29	_	_	9 2	11	200	7	14		-						
	_					L	1 2	131		,   -			٠	لىت.			т			г	r —	
		ME OF NO.	CARD		1 1	τ τ	5 %.	SIC	SMA-T	SPECIFIC VOLUME		of DΥ	A D	500	DOLLA	D <sub>2</sub> ml/I	PO4-P	TOTAL-P	NO3-N	NO3-N		
	HR	1/10	1176									×	103	****	30111		µg • 01/1	µ <b>g</b> • a1/1	µg - 01/1	µg - αt/1	μg • αt/	'
								-														
			ST			071	3639		565	002	3502	00	000		257		•					
	:	130	OBS			071	36389		565						257							
			ST.			071	3638		64		3601		24		258							
			ST			072	3638		564	002	3690	00	47		260							
		130	085			072	36370		563	000					261							
			ST			072	3637		63		3771		71		262							
		130	5T 08S	0050 0055		072 072	3638 36385		564 564	002	3767	01	118		265 266							
		130	ST			958	3626		585	002	1876		176		237							
		130	OBS	0083		930	36204		588	002	1070	, 01			230							
		. , .	ST			923	3645		509	001	9694	. 02	227		234							
		130	085			913	36548		519	001	,,,,	. 02			234							
		•	ST			866	3651		528	001	7952	0.2	275		222							
			ST			802	3646		540		6864		318		208							
		130	085			774	36431		545						201							
			ST	D 0200	1	737	3638	26	550	001	6085	04	+00		196							
		130	085	T0218	1	714	36348	26	553					15	192							
			ST	D 0250	1	656	3625	26	560	001	5330	04	179	15	178							
			ST	D 0300	1	564	3608	26	568	001	4670	0 :	554	15	156							
		130	OBS			522	36014		572						146							
			ST	-		365	3575		586	001	3152	? 0€	593		105							
		130	085			316	35678	_	590						092							
			ST			194	3551		701		1802		318		061							
			ST			041	3534		716	001	0471	0.9	929		021							
		130	085			975	35277		723	000	0061				005							
			ST			905	3527		734		8856		26		987							
	,	130	ST	-		783 698	3524		751	000	7292	: 11	107		957							
		130	08S			672	35203 3518		760 762	000	6207	, ,,	174	_	937 930							
			ST			572	3509		768		5573		233		906							
			ST			497	3502		772		5184		293 287		891							
		130	085			493	35017		772	300	J104	. 14	. 0 1		891							
			ST			466	3500		774	000	5027	7 12	338		895							
			ST			442	3499		775		4886		387		901							
		130	oes			422	34980		777						909							
		-	ST	_		421	3498	_	777	000	4779	9 94	436		909							
			5.7	D 1500	0	405	3497	2	778	000	4733	3 14	483	14	919							

EFERENGE BY ID. IDE NO.	CODE	LATITUDE 1/	10	ONGITUDE 3	MARSOEN SQUAPE	STATION T (GMT)	YI	EAR		ATOR'S TATION NUMBER		DEPTH TO BOTTOM	MAX, DEPTH OF S'MPL"	0		VE ATIONS PEII SE	WEA- THER CODE	CODES		5	NODC TATION IUMBER
11385	ML	35065N	0.	48145W				869	E19 00	8		4389	15	29	4	3	X 2	6 8			0008
					COLO		MIND	BARO			- VIS	NO.	SPE	CIAL	]						0
					CODI		OB FOR, E	AR ETER		W ET	CODE	DEPTHS	OBSERV		:						
					***	17	508	190	206	189	7	14			1						
	MESSENGR	CAST	CARO		T	+					_	-	-		1					-	
	HR 1/10		TYPE	DEPTH (m)	7 10	s ·	SIG M.A	~T	ANDMALY-XI	, D	YN. M	. VELO		0 2 ml		04-P	TOTAL-#		NO3-N	5104-5	рН
	74 17 10					+	+	-		-	x 103		-		,,,	- 07 1	Pg = 01/1	μg - ot/!	yg = at/l	μg - σl'l	
			STD	0000	2022	36.25	2575		000000												
	141		BS	0000	2033 2033	3625 36252	2565 2565		0023520	) 0	000	152									
			STD	0010	2008	3625	2571		0022952		023	152									
			STD	0020	1985	3624	2577		0022449	_	046	152 152									
	141	0	B S	0025	,	36241	2711		002244.	, ()	U 4 0	152	30								
			STO	0030	1966	3624	2581		0022039	5 0	068	152	21								
			STD	0050	1936	3623	2589		0021420	_	112	152									
	141	0	ВS	0051	1935	36230	2589					152									
			STD	0075	1917	3622	2593		0021106	0	165	152	-								
	141		8.5	0076	1916	36222	2593					152									
			STD	0100	1874	3635	2614		0019217	7 0	215	152									
	141		BS	0101	1872	36356	2615					152	18								
			SID	0125	1800	3638	2635		0017310		261	152	02								
	1 / 1		SID	0150	1744	3638	2648		0016078	0	303	151	90								
	141		BS	0152	1740	36384	2650					151	89								
	141		STD BS	0200	1692	3632	2656		0015479	0 :	381	151									
	141		stn.	0203 0250	1689	36315	2657					151									
			STD	0300	1616 1549	3620	2665		0014793		+57	151									
	141		85	0305	1543	3608 36072	2671 2672		0014341	0	530	151									
			STD	0400	1450	3590	2679		0012024		~ ~ .	151									
	141		BS	T0409	1439	35885	2680		0013824	0.6	571	151									
	• • •		STD	0500	1262	3562	2697		0012212			151									
			STD	0600	1086	3540	2713		0012312 0010840		302	150									
	141		3.5	0613	1065	35381	2715		0010840	0 :	3 7 1	150									
			STD	0700	0937	3530	2731		0009174	1.0	17	150									
			STO	0800	0796	3521	2746		0007716		102	149									
	141	01	3.5	0812	0780	35194	2748					149									
		:	Q T 8	0900	0644	3508	2758		0006531	1.1	173	149									
			SID	1000	0533	3500	2766		0005698	-	234	148									
	141		3.5	T1010	0524	34995	2766					148									
			STD	1100	0497	3500	2770	(	0005330	12	89	148	-								
			STD	1200	0471	3500	2773		0005094	_	341	148									
	141	06		1269	0457	35003	2775					1490	03								
			TD	1300	0451	3500	2775	(	0004910	13	91	1490	05								
			TD	1400	0437	3500	2777		0004831		40	149	16								
	141		STD	1500	0428	3500	2778	(	0004815	14	88	1492									
	141	06	55	T1516	0427	35001	2778					1493	32								

REFERENCE	SHIP					- # /	ARSDE	N	STATION	N TIM				ORIGIN	ATOR'	S		PTH	MAX. DEPTH			A VE	WEA-	CLOUD			NODC
TRY ID.	CODE	LATITU		LONG	11/10 1/10	25	SOUAR	- 1	IG N			YEAR	CRUISI NO.		TATIO			O TOM	OF	1		ATIONS	THER	CODES			STATION NUMBER
	++		1/10			-			MD DAY					+			-		S'MPL'	1	1	PER SEA	1	TYPE A M			
31138	5  ML	3502	N	048	08 W	1	13 /5	8 B	11 18	0 2		968	E19	AIR TE			274		_15	31	5	2	X6	5 8	1	l	000
							-				SPEEO	BARC	)~ <del> </del>	DRY	WE.	V15	, OB	BS.		CIAL							
								ODE	im)	IR.	OR FORCE	(mbs		BULB	BUL	.0	DEP	THS	COSERV	A 110143							
									3	1 5	19	176	5 2	00	19	4 6	14	4									
	MESSENG	CAST	CAR	ID					Ι.	Ť			SHCIL	c volu	44.5	₹ ∆ D	Ť	sou	ND.		T	PO4-P 1	OTAL-F	NO2-N	NO3-N	5104-5	
	TIME HR 1/10	NO.	TYP		DEPTH (	m1	T *(		s °/.		SIGMA	A-T	ANOA	AALY-XI	0,	X 103	^-   -	VELO		02 ml/			µg • al/l	ug - et/l	yg - al/l	pg - 01/	
	HX 1710	·								_					_		+		-		+						+
	1	l I	ST	ו מו	0000	)	198	12	3624	- 1	257	7	002	231	5	0000	, ' ,	152	31		-	- 1	,		1		ı
	02	4	085		0000		198		3624		257		002	2)1		0000		152									
	02.		51		0010		198		3626		257		002	224	5	0022		152									
			ST	ΓĎ	0020		198	34	3627		257		002	222	0	0045	1	152	35								
	02	6	OBS		0026		198		3627		257							152									
			ST		0030		198	_	3627		257			224		0067		152									
			5 T		0050		193		3624		258		002	142	6	0110		152									
	02	6	085		0051		193		3623		259							152	_								
			ST		0075		180		3634		263		001	751	6	0159		151									
	0.2	ь	085		0076		180	_	3634		263		001					151									
	02	٤	5 T 08 S		0100		176 176		3636 3636		264		001	652	J	0202		151 151									
	021	ь	ST		0125		172		3634		264		001	593	5	0242		151									
			51	-	0150		169		3631		265			550		0282		151									
	026	5	OBS		0153		169		3630		265			,,,,,		0202		151									
			ST		0200		164		3624		266		001	508	2	0358	-	151	_								
	02	6	085		T0202	2	164	.7	3623	8	266	1					1	151	68								
			57	ΓD	0250	)	159	99	3620		266	9	001	441	4	0432	! 1	151	60								
			51	ſΟ	0300	)	154	+2	3611		267		001	394	9	0503	1 ]	151	50								
	02		085		0300		154		3611		267							151									
	02	6	085		T0393		141		3585		268							151									
			ST		0400		140		3583		268			341		0639		151									
	0.7	,	SI		0500		122		3555		269		001	214.	2	0767		150									
	02	Б	08.5 5.1		T0584		107		3536 3535		271 271		001	048	7	0880		150 150									
			5 T	_	0700		086		3524		273			836		0975		150 149									
	02	6	085		0773		0.75		3518		275		550	320	-	V / 1 )		149									
	- 2	-	ST		080		072	-	3517		275		000	692	9	1051	_	149	-								
			ST		0900		063		3512		276			603		1116		149									
	02	5	085		10964		057		3509		276							149									
			ST	ľο	1000		055	7	3508		276	9	000	543	8	1173	1	149	00								
			ST	ΓD	1100	)	050	) 4	3504		277	_		513		1225		148	94								
			ST		1200		04€	52	3501		277		000	490	1	1276		148									
	02	6	085		1217		045	_	3500		277							148									
			51	_	1300		043		3499		277			475		1325		148									
			ST	_	1400		041		3498		277		000	468	7	1372		149									
	02	ь	OBS	•	T1484	+	040	8	3497	()	277	в					1	149	10								

ID.	SHIP	LATITU	JDE .	LO	NGITUDE	DREE	MAM SQL	ISDEN	STAT	ION T	I A I E	YEAR	T.,	ORIGIN			DEPTH	MAX		WAVE		WEA				NODC
NO.	-	•	1,:10		11:10	9 =	10*	1.	MO	)AY H	P 1/10		CRUIS NO.		STAT		BOTTON	0.5	0.0	HOT PE		THER			- 5	TATION UMBER
385	ML	3502	N	04	804 W		113	58	11 1	9 ]	25	1968	E19	01	0		2926	14	34		1 100		1		-	
								W A	ATER.		IND	BAS	-	AIR TE			NO.			13 12	Į.	X 5	6 8			0010
								COLOR	TRANS	DIR.	SPEED	A4 E1	T ER	DRY		ET COD	0.07		CIAL							
								-	+ -	10	FORCE	-+	-	gnr8	-	JLB .	-			1						
[	*ESSENG#						T -	1	-	10	510	24	4 1	78	16	61 5	14	L								
- 1	IIME .	NO.	C A R TYPI		DEPTH (	m)	7	€	5	٠/	SIG	M A —T		MALY-A		₹ A D DYN. M	SOI	UND	02 m1	PO.	_P r	OTA L-P	NO2-N	NO <sub>3</sub> -N	SI 04=51	T
- F	IR 1'10	-					-		+							x 10 <sup>3</sup>	VEL	CITY		να -	1110	µg - ot≀l	ug - of.	µg - 01/1	µg - a1 1	pН
- 1		1	ST	,	0000	,																				
	125		085		0000			937 937	362		251		00.2	1214	4	0000		219								
			5.7		0010			979	362 362		258						152									
			ST		0020		_	941	362		258			127		0021	152									
	125		OBS		0023			941	362		258 258		, 00 2	1358	B	0043	152									
			ST		0030			939	362	-	258		003	1289	_	0044	152									
	125		085		0048		_	934	362		250		002	128:	)	0064	152									
			ST	0	0050			933	362		259		00.2	1218	۵	0106	152									
	125		OBS		0071			927	362		250		002	1210	0	0106	152									
			ST	D	0075			908	362		259		00.2	0538	R	0159	152 152									
	125		OBS		0095		18	330	363		262			0330	_	0157	152									
			ST	Ð	0100		18	320	363		262		001	7880	)	0207	152									
	_		ST	D	0125		17	773	363	8	264			6686		0250	151									
	125		OBS		0144		17	740	363	96	265			0000		0230	151									
			ST	D	0150		17	731	363	8	265	2	001	5776	5	0290	151									
	125		OBS		10191			72	362	75	265	8					151									
			ST		0200			559	362	5	266	0	001	5163	3	0368	151									
	125		ST	0	0250			91	361	5	266	7	001	4600	)	0442	151									
	125		085		0284			46	360		267						151									
	125		310	)	0300			29	3604		267		0014	4197	7	0514	151	45								
	125		0BS ST		T0373			37	3588		268						151	26								
			ST		0400			90	3580		268		0013			0652	151	14								
	125		085		0500 T0560			14	3554		270		001	1965	,	0778	150	68								
	. 2 )		510		0600			07 17	3541		271						150									
			STO		0700			33	3534		272		0010			0888	150									
	125		OBS	_	0744			69	3521 3517		274		0008	5122		0979	149									
			STO	)	0800		07		3517		274		000				149	_								
			STO		0900			42	3516		275		0006			1054	149									
	125		OBS		T0928		06		3515		276 276		0005	915		1117	149									
			STO		1000		05		3510		277		0005	340			149									
			STO		1100		04		3503		277			-		1174	149	-								
	125		085		1169		04		3499		277		0005	,110		1226	148	-								
			STD		1200		04	-	3500		277		0004	944		1274	148									
			STD		1300		04	-	3499		277		0004			1276 1326	1489	_								
			STD		1400		04		3497		2770		0004			1374	1490									
	125		085	1	11413		04		3497		2770			J-4-U		1314	149	-								
									'	_		_					149	ΤŢ								

ID. NO.	SHIP	LATITU	DE 1	ONGITUDE 50	MARSDEN SQUARE	STATION IT	YEAR		TION	DEPTH DEPTI	H OB	WAVE SERVATIONS [HGT] PER] SE	WEA- THER CODE	CLOUD CODES		S	NODC TATION IUMBER
385	ML	3510	N 0	4756 W	113 57	11 20 1	22 1968	E19 011	3	658 16	28	2 4	X1	2 7			0011
303		3210			WA		IND BAR	0 44 3 T C 44 B	. 6			) <u>- 14 1</u>	1 7. 2	1 2 .,			00111
					COLOR	TRANS DIR.	SPEED MET	ER DRY	WET CODE	Onc   3P	ECIAL VATIONS						
					CODE	(m) (m)	FORCE (mb		3010	DEFINS							
						21	504 22	7 200 1	194 7	14							
	M ESSEN GR	CAST	CARD					SPECIFIC VOLUME	₹ △ D DYN. M.	SOUND		PO4-P	TOTAL-P	NO2-N	NO3-N	SI O4-SI	
	TIME HR 1/10	및 NO.	TYPE	DEPTH (m)	1 ,C	s	SIG M A -T	ANOMALY-X107	DYN. M. x 10 <sup>3</sup>	VELOCITY	02 ml/	µg = a1/1	ug - ot/t	νg - αl/l	νg - α1/1	μg • α1/1	pН
	F1X 1/10				+	1			1			+					
		1 1	STD	0000	1946	3624	2587	0021436	0000	15221		I		1		l	1
	122	,	085	0000	1946	36238	2587	0021430	0000	15221							
	122	-	STD		1946	3624	2587	0021472	0021	15223							
			STD		1944	3624	2587	0021466	0043	15224							
	122	2	OBS	0027	1943	36237	2587			15225							
			STD	0030	1942	3624	2588	0021450	0064	15225							
			STD	0050	1935	3624	2590	0021325	0107	15226							
	122	2	OBS	0054	1933	36239	2590			15226							
			STD		1828	3632	2623	0018238	0157	15201							
	122	2	OBS	0081	1806	36344	2630			15196							
			STD		1765	3640	2645	0016253	0200	15188							
	122	2	085	0108	1750	36412	2649	0015401	0010	15185							
			STD		1731 1702	3638 3633	2652 2655	0015691	0240 0279	15182 15177							
	122	•	085	0162	1687	36310	2657	0015470	11219	15174							
	122	-	STD		1637	3622	2662	0014957	0355	15164							
	122	,	085	T0217	1615	36187	2664	0014737	0000	15160							
		-	STD		1578	3613	2668	0014458	0428	15153							
			STD		1510	3602	2675	0013932	0499	15139							
	122	2	OBS	0325	1470	35956	2679			15129							
			STD	0400	1321	3569	2690	0012702	0632	15090							
	122	?	085	T0432	1259	35592	2695			15073							
			STD		1112	3539	2708	0011153	0752	15031							
			STD		0936	3519	2723	0009759	0856	14981							
	122	2	085	T0656	0857	35128	2731			14960							
			STD		0826 0749	3515 3520	2737 2753	0008444	0947	14956							
	122	,	085	0869	0691	35240	2764	0007029	1025	14944							
	122	-	STD		0652	3519	2765	0005840	1089	14922							
			STD		0547	3507	2770	0005374	1145	14895							
	122	•	OBS	T1085	0481	35002	2772	000001.4	11.,,	14882							
		-	STD		0477	3500	2772	0005065	1197	14883							
			STD		0449	3498	2774	0004950	1247	14887							
			STD	1300	0428	3497	2775	0004848	1296	14895							
	122	2	OBS	1360	0417	34969	2777			14901							
			STD		0411	3497	2777	0004728	1344	14905							
			STD		0399	3497	2778	0004669	1391	14917							
	122	2	085	T1632	0392	34967	2779			14936							

NCE 10.		нгр	LATITUE	30	LOI	NGITUDE	MA SO SO	RSDEN UARE	STAT	TION TIA	١Ē	YEAR		RUISE	ORIGIN	_		DEP	LOEP	TH)	V 285EF	VAVE RVATION	s	WEA-	CLOUD	T		NODC	1
NO.	cc	10E		1/10		1/10	5 × 10*	1.	MO	DAY HR	1/10		10	NO.		ITATI MUP		8011		F		GT PER		CODE	TYPE A W	7		A CLAN BER	
385	м	14	3502	N	04	802 W	113	58				196		19	01	2		24.6		_			-			-		00.0	1
500	1	- I -	3,502		04	002 #	111		TER		ND ND		_		AIR TE		٠ T	246	-	3 20	)  2	2 2		× 1	4 7			0012	
								COLOR	_	1	SPEED		ARO- ETER	-	DRY	_	ET COD		.   2	PECIAL									
								CODE	(m)	OIR.	FORC		nbsl		BULB	81	IL8	DEPT	HZ CAZE	RVATION	,,,								
										20	510	2	24	2	11	20	06 6	14											
1	MES	SENGR	2.44	CA				-		-			Τ.	1			₹ △ □	1		T	-								_
	l '	IIMZ OF	NO.	14		DEPTH I	n)	7 10	S	•/	\$IG	MA-T	13	A NOA	C VOLU	67E	DYN. A	Λ ] ,	ELOCITY	O2 m	IZI.	PO <sub>4</sub> =P μg = 01/1		9 + 01 I	NO2+N ug = at 1	NO3-N 110 - gu	51 O 4-5 V9 - 01/		
	HR	1/10	-			-	-	-	-				+				X 10-	-				-	+		-	71	-	-	
ı	1			٠.	TO	0000	. 1	070	34		2.5	0.0	1	٠, ٦	300	. !	0000	١,					1						
		121		OB:		0000		979	36	262	25	80		<i>1</i> 0 2	208	4	0000	_	5230										
		121			o TD	0010		976	36			80		000	206	^	0022		5230										
					TO	0020		972	36			81			199		0044		5231 5232										
					ΤO	0030		967	36			83			190		0066	_	5232										
		121		08	-	0031		966		258	25			_		-		-	5232										
				S	TD	0050		964	36			83	(	02	192	8	0110		5234										
		121		08		0060		946	36	257	25	88						1	5231										
				_	τD	0075		874	362			09	0	01	956	3	0162	1	5214										
		121		OB:		0091		814		317		26							5200										
					TO	0100		793	36			32	C	001	742	0	0208		5195										
		121		08		0121		748		351		45	_						5186										
					TO To	0125		740	363		26				619		0250	_	5184										
		121		08	_	0150 0181		691	36; 36;		26	54		100	550	8	0290		5173										
		121			TD	0200		620	36			63	(	00.1	479	4	0365		5162 5158										
		121		OB:		T0240		574		106		67		, , ,	717	•	0 0 0 0	_	5150										
					Τo	0250		562	360		26		C	01	447	0	0439		5148										
				5	TD	0300		499	359	97	26		0	001	406	0	0510		5135										
		121		OB:	S	0358	:	419	356	836	26	81							5117										
					TD	0400		358	35	73	26	86	C	01	315	6	0646	1	5103										
		121		OB:		T0470		245		568	26								5074										
					TO	0500		166	354			04			156		0770	_	5051										
					TD	0600		942	35		27				963		0876		4984										
		121		08:	TD	0700		777	35(	-		39	(	000	819	9	0965	_	4937										
		121			S TD	0800		766	35	76	27	52			709	,	1041		4934										
					To	0900		652	35			52 64			601		1041		4928 4922										
		121		08		0949		621		189	27		•	, 0 0	001	0	110	_	4918										
					To	1000		579	35		27		С	000	530	3	1163		4909										
					TD	1100		509	350		27				512		1215		4896										
		121		08	s	T1193		460		995	27								4891										
				S	ΤO	1200		458	349	99		74	0	000	499	5	1266		4891										
					TΟ	1300		435	349			75	C	000	486	7	1315	1	4898										
				-	TD	1400		415	349			77	C	000	477	3	1364		4907										
		121		OB:		1499		401		965	27				_				4917										
					TO	1500		401	349		27				475		1411	_	4918										
		121			To	1750		384	349			79	C	000	474	ל	1530		4953										
		121		08	3	T1807	(	384	34	959	27	14						1	4962										

REFERENCE	SHIP		T		MARSDEN	STATION TO			ORIGIN	ATOR'S		DEPTH	MA		W	AVE	WEA-	CLOUG			NODC
TRY ID.	CODI		DE LC	NGITUDE TOUR	SQUARE 10" 1"	MO OAY H	R.1/10	R CRUIS		TATION BEMUN		10	0.0	: [		VATIONS GT PER SE	THER COOE	TYPE AM		N.	TATION UMBER
311385	MI	3503	- 1	756 W		11 22 1		8 E1	9 01	3		4206			7 3		×1	8 3			0013
J 1 1 3 0 3	-, · · · <u>-</u>	1 33-0					ZINO T	ARO-		MP. °C	Т.	NO.	Τ'		<u> </u>		, -			,	
						R TRANS. DIR.	SPEED M	ETER	DRY	WET	COD	200	OBLE	PECIAL RVATIO	NS						
					COOL	20	FORCE D	mbs)	206	194	_	14	-		$\dashv$						
						20	304 2	34 4	206	1		1		1	Ц,						
	MESSE	NGR CAST	C ARD TYPE	DEPTH (m)	T *C	s */	SIGMA-1		MALY-X	ME ID7	₹ A o	SC VE	LOCITY	02	nl/L	PO <sub>4</sub> -P	TOTAL-P	NO2-N	NO3-N	\$1 D4-\$1	ρН
	HR 1,		ITTE								X 10 <sup>3</sup>	V E I	LOCIII	-	$\rightarrow$	µg = of/t	µg · ot/l	μg + αt/l	ug - at/l	µg + a1/1	-
								1	_						- 1			l	t		
			STD	0000	1941	3623	2587	002	2137	8 C	000		220								
	1	19	OBS	0000	1941	36729	2587	00					220								
			STO	0010	1938	3623	2588		2136		021		220								
		10	STD	0020	1934 1932	3622 36221	2589 2589	00;	2132	U C	1043		221								
	1	19	OBS	0026 0030	1932	36221	2589	00	2128	0 0	064		221								
			STO	0050	1923	3623	2591		2115		106		223								
	1	19	OBS	0051	1923	36225	2592	00.		J 6	,100		223								
	•	• /	STO	0075	1914	3622	2593	00	2104	7 0	159		224								
	1	19	085	0077	1911	36218	2594						224								
	-	•	STD	0100	1848	3629	2616	00	1902	3 0	209	15	211								
	1	19	085	0102	1842	36295	2618					15	209								
			STD	0125	1772	3630	2636	00	1720	0 0	255	15	193								
			SID	0150	1709	3631	2652	00	1574	7 (	296	15	179								
	1	19	085	0153	1702	36315	2654						177								
			STD	0200	1625	3619	2662	00	1490	6 0	372		160								
	1	19	085	T0204	1619	36178	2663						159								
			STO	0250	1584	3615	2669		1444		446		155								
		• •	STO	0300	1527	3607 36053	2675 2676	00	1393	0	517		145								
	1	19	OBS STD	0307 0400	1517 1350	3572	2687	0.0	1306		652		100								
	1	19	OBS	T0406	1339	35697	2687	00	1300	0 (	002		097								
	-	17	STO	0500	1130	3541	2706	00	1133	6 (	774		038								
			STD	0600	0937	3519	2723		0977		879		982								
	1	19	OBS	10622	0899	35159	2726					_	971								
	-	• /	STO	0700	0778	3511	2741	00	0799	4 (	968		937								
			STO	0800	0646	3506	2756	00	0656	1 1	041	14	902								
	1	19	OBS	0832	0610	35047	2760					14	893								
			STD	0900	0541	3503	2767	00	0546	2 1	101		876								
	1	19	OBS	0958	0493	35024	2772						866								
			STD	1000	0484	3502	2773		0489		153		869								
			STD	1100	0465	3501	2774		0483		201		878								
			STD	1200	0447	3500	2776		0477		250		887								
	_		S <b>T</b> 0	1300	0431	3499	2 <b>7</b> 77	00	0474	1 ]	297		897								
	1	19	085	1309	0430	34986	2776	00	04.70	, .			898								
			STO	1400	0417	3498	2777		0472		344		908								
		10	STO	1500	0404	3497	2778	00	0472	0 ]	392	_	919								
	1	19	085	T1571	0396	34961	2778					14	927								

******	uce.						T .				_				ORICH	UA TO P	•			MAX.		NAV 4	- V/E	7		CLOUD	Т	-	
REFERE	_	SHIP	LATITU	DE	LON	SITUDE	DCTP		JARE	STA	TIDN T	ME	YEAR	CRU		STATIO		DEP		DEPTH	01	N ABSERV	AVE (ATIONS		YEA- HER	CODES			POITATZ
ODE	ID. NO.	CODE		1/10		1/1		10*	, 1*	MO	DAY	R.1/10		NE	5.	NUME	ER.	BOTT		S'MPL"	DIR	HG	T PER S	EA C	ODE	TEPE TA VI	1		MUNSES
311	385	ML	3505	N	047	58 W		_	57		23		968	E 1	9 01	4		384	•0	15	26	4	3	)	x 1	6 7			0014
							' '		W.A			VIND	BARG	1		MP. 1		NC.	5. T		CIAL	7							
									COLOR		5. DIR.	SPEED	METE	R	DRY	WE		100	35.	OBSERV		5							
									CODE	im		FORCE	(mbs	-	BULB	BUI	_	-	-			-							
											20	514	21	3	206	20		14	•			1		1				-	
		MESSENC		CAF		DEPTH	(m)	.	r *c		s +4.	SIGN	A-T		IFIC VOL		₹ A C	и.	sou		Do mi		PO4-P	TOTA		NO2-N	NO3-N	5104-	
		HR 1/1		TYE	PE									AN	DMALY-1	10	x 103	Ι,	VELD	CIII		,	yg - o! i	μg -	01/1	µg - 01/1	µg = 01,	pg - at	1
					TO	000			959		24	258		00	2171	. 5	0000		152										
		12	0	085	_	000			959		244	258				_			152										
					TD	001			959		24	258			2175 2172		0022		152 152										
		12	0	OB:	T D	002			956 954		24	258 258		00	2112	. 0	004:		152										
		12	0		10	003			949		24	258		0.0	2160	) 5	0069		152										
		12	0	08:		004			936		234	258							152										
					TD	005		1	934	36	23	258	9	00	2138	0.6	0108	3 1	152	26									
		12	0	08	5	007	2	1	920	36	214	259	1						152										
					TD	007			912		22	259		00	2099	8	0161		152										
		12	0	08		009		-	856	_	273	261				_			152										
					TD	010		_	837		29	261			1875		0211		152 151										
		12		08:	TD	012			756 709		33 332	264 265		UU	1003	, 6	025		151 151										
		12	.0		TD.	015			697		31	265		0.0	1550	0.0	0295		151										
		12	0	08:		T019			631		206	266					02.		151										
		•••	•		TD	020			624		20	266		0.0	1481	1	037	1 1	151	60									
					TĎ	025		1	566	36	13	26	1	00	1419	4	0444	4 ]	151	49									
		12	0	08	_	028			513		044	26							151										
					TO	030			492		00	26		00	1369	92	0513		151										
		12	O	08		T038			353		728	268		00	1276		0649		150 150										
					TD To	040 050			320	-	68	269			1279		076		150										
		12	0	08:		T058		_	012		289	271		00	1146	, 0	0,0		150										
		12			T D	060			969	_	25	272		0.0	0987	77	087		149										
					TD	070			783		09	273		0.0	082	18	0964	4	149	939									
		12	0	OB:		077	16	C	676	3 9	026	274	9						149	909									
				5	TD	080			655		03	279			069		1039		149										
					T D	090			577		05	276		0.0	0580	)5	110		148										
		12	0	08		T096			534		056	27		00	06.50	2	116		148										
					T D T D	100			)518 )477		04 01	27°			0520		115		148	883									
					TD	120			)446		99	27			048		125		148										
		12	0	OB:	-	122			439	_	983	27			,				148										
		- *			TD	130			424		98	27		00	0470	00	130		148										
				S	TD	140	0	C	413	34	98	27	78	00	046	59	135		149										
		12		OB:	<	T149	22	(	411	34	982	27	78						149	921									

E				MARSD	Chi C-				ORIGINA	700*5		MAX.	T	11. 4 3 15			T 0. 2	_	- 1	
SHIP	LATITU	IDE LI	ONGITUDE DO	SQUAS	£ 31	ATION TI IGMTI		YEAR		ATION	DEPTH	DEPTH	OB	WAVE SERVATION	5	WEA-	CLOUD		5	NODC TATION
CODE		1/10	· 1/10 P Z	10"	1. WO	DAY H	R,1/10			MBER	BOTTOM	S"MPL"	S DIR.	HGT PER	SEA	CODE	TYPE A.M	Ť	N	UMBER
15 ML	3500	N O	4800 W	113	58 11	24 1	24 1	968	E19 015		4572	16	30	6 2	j	X1	8 2			0015
					WATER	W	IND	BARO		- VIS	NQ.	SPE	CIAL							
				C	OLOR TRA	NS. DIR.	SPEED OR FORCE	M ETE (mbs		WET COD	OBS. DEPTHS		ATIONS							
						35	515	227	7 206	161 7	14									
MESSEN TIME	GR CAST	CAPD	DEPTH (m)	т ,	e l	s ·/.	SIGM	A - T	SPECIFIC VOLUM	UTN, N	son	UND	02 ml/l	PO4=P		TA L-P	NO2-N	NO3-N	SI OA-SI	pH
HR 1/		1176		-		-	-		anomati-iv	x 10 <sup>3</sup>	VELO	OCITY		yg = a1/	νg	- at/t	μg - σt/l	μg - a1/l	µg - at/l	-
		STD	0000	196		524	258	,	0021940	0000	152	227						l	1	
12	0.4	OBS	0000	196		5244	258		0021940	0000	152									
1.0		STD	0010	196		524	258		0021885	0022	152									
		STD	0020	199	_	524	258	-	0021802	0022	152									
12	24	085	0027	199		5238	258		- 32 1 0 3 2	(/ <b>U</b> → <b>u</b>	157	-								
		STD	0030	199		524	258		0021637	0065	152									
		STD	0050	190		525	259		0020443	0108	152									
12	24	OBS	0053	189		5248	260				152									
		STD	0075	179	94 3	535	263	4	0017212	0155	151									
12	24	085	0080	177	78 3	5360	263				15									
		510	0100	174	46 3	537	264	7	0016027	0196	15	182								
12	24	085	0106	17:	36 36	5372	265	0			151	180								
		STO	0125	170	06 30	532	265	3	0015550	0236	15	174								
		STD	0150	166	59 3	526	265	7	0015225	0274	15	166								
12	24	085	0159	165		5240	265	9			151	163								
		STD	0200	160		515	266	4	0014729	0349	151	153								
12	24	OBS	T0215	158		5123	266				151									
		STD	0250	156		510	266		0014368	0422										
		STD	0300	151		504	267		0013981	0493	151									
1 2	24	OBS	0320	149		5000	267				151									
		STD	0400	137	_	576	268		0013366	0629	151									
12	24	085	T0425	133		5690	268				150									
		STD	0500	114		542	270		0011448	0753	150	-								
		STD	0600	093		519	272		0009725	0859	149									
12	4	085	T0649	085		5130	273		000000	0000	149									
		STD	0700	082		516	273		0008361	0950	149									
	37.	STD	0800	075		521	275		0006985	1026	149									
12	4	085 STD	0860 0900	070 069	-	5245	276		0005040	1000	149									
		510	1000	0.55		51 <b>9</b> 508	276		0005840	1091	149									
12	24	085	T 1074	049		5024	277		0005342	1146	148									
12		STD	1100	048	-	502	277	-	0005010	1198	146									
		STD	1200	045		499	277	-	0003010	1248	146									
		STD	1300	043		498	277		0004942	1240	148									
12	4	085	1352	042		4970	277		5554661	15 41	149									
	•	STD	1400	041		97	277		0004734	1344	149									
		STD	1500	040	_	497	277		0004674	1391	149									

REFER	ENCE	51115			_ =	MARSDEN	STATION T	IME		0	IGINA'	OR'S	T	DEPTH	MAX. DEPTH		WAVE	A E	A- CLO	DUD.			40DC
TRY	ID.	CODE	LATITU		LONGITUDE 演员	SOUARE	(G A4.1)		re A R	CRUISE		TION		TO BOTTOM	OF		SERVATIONS	THI COI		DES		51	UNBER
-	-			1/10	1,10 =	10" 1"	MO DAY H			NO		A4 BEP	-		S, Ya bf, 2		HGT PER S	A	1171	AWY		-	-
31	1385	MŁ	3503	N	04805 W	113 58		122 1	968		016	- 40	_ [	2926	15	30	6 3	X ]	1 8	2		0	016
						W.A		SPEED	BARC	)•	R TEMI	WET.	VIS	OBS.		CIAL							
						CODE	TRANS DIR.	OR FORCE	(mbs			8018	CODE	DEPTHS	OBSERV	A HONS							
							0.7	508	240	21	1	156	7	14			1						
	-		. 1				+	1				5	Λ δ	-									
		MESSENG B TIME	9 NO.	CARD	DEPTH (m)	T *C	5 *	SIGM	A =1	SPECIFIC	VOLUM LT-X10°	DY	△ D. N. M. 10 <sup>3</sup>	. VELC		02 ml/	PO4→P yg + 01/1	101AL-			NO3-N pg = 01/1	170 + 6H	рН
		HR 1/10	+					+	_				10-				+	-		-+			
				6 T		1040	24.27	25.0		0021	006	20	0.0	157	120								
				ST		1969	3627	258		0021	805	00	00	152 152									
		122	-	08S ST		1969 1967	36266 3627	258 258		0021	773	0.0	22										
				5 T		1966	3627	258		0021			44	152									
		122	,	085		1,000	36272	2 30	7	0021	114	00											
		120	-	SI		1964	3626	258	3	0021	841	0.0	65	152	731								
				ST		1961	3624	258		0021	_		09										
		122	2	085		1961	36234	258	2					152	233								
				5 T	0 0075	1922	3622	259	1	0021	259	01	63	152	226								
		122	2	085	0075	1922	36218	259	1					152									
				5 T	0 0100	1823	3632	262	4	0018	227	0.2	13										
		122	2	085		1823	36317	262		20.				152									
				ST		1772	3633	263		0016		-	57										
				ST		1717	3635	265		0015	670	0.2	97										
		122	2	085		1715 1599	36351	265		0014	402	0.3	73	151 151									
		127	,	5T 0BS		1599	3614 36141	266 266		0014	000	0.3	113	151									
		124	2	ST		1575	3613	266		0014	202	0.4	46										
				ST		1520	3605	267		0013			17										
		127	,	085		1516	36038	267		0013		0.2	•	15									
			-	ST		1317	3565	268		0012	914	0.6	51										
		122	2	085		1310	35641	268						150									
				ST	0 0500	1196	3546	269	7	0012	205	0.7	77	150	061								
				5 T	0 0600	1041	3530	271	3	0010	763	0.8	91	150	021								
		123	2	OBS	T0612	1020	35285	271	6					150									
				5 <b>T</b>		0789	3521	274		0007			82		943								
				ST		0610	3515	276	8	0005	390	10	47	148	889								
		122	2	085		0598			_														
				ST		0566	3509	276		0005			00		887								
				ST		0531	3505	277		0005	303	1.2	54		889								
		12	2	085		0526	35041	277		0005	120	, .	206		889								
				ST		0493	3502	277 2 <b>77</b>		0005		-			889 893								
		1.2	,	ST 085		0462 0445	3500 34994	277		0004	714	1 4	256		897								
		123	2	ST		0445	3499	277		0004	804	1.3	305		900								
				ST		0422	3500	277		0004		-	353		910								
				ST		0415	3500	277		0004		-	399		924								
		12	•	085		0414	34997	277							927								

Table XIV.—Observed and interpolated oceanographic data for stations taken by USCGC BOUTWELL at Ocean Station ECHO, 30 November-5 December 1968, prepared from NODC listing No. 13-8078

PEFERENCE	CODE	LATITU	0E LO	NOUTUDE 1/1/10	MARSO SOUAL	RE		ION TI		YEAR	CRUI	ORIGINA SE ST	TOR'S ATION JMBER	$\neg$	OEPTH TO BOTTON	000	H c		VE ATIONS PER SE	WE THE COL	ER C	LOUD		1 1	NODC STATION NUMBER
_+_	-			1 1						968	E 2				4517				2	x:		6			0001
318078	I OU I	3459	N   02	1806 W	113	WAT			160 1	T	1	AIR TEM	2. °C			T		7 2	12	1 ^4	2   0	10		- 1	0001
1					-		TRANS		SPEED	METE		DRY	WET	CODE	NO. 085.	O S F R	ECIAL VATION	5							
/						COOE	[m]	DIR.	FORCE	lmbs		BULB	BULB		DEPTHS	5									
						DT	SD	24	513	247	,	161	150	7	25										
				I	T		Τ.		Т				.   5	ΛΩ	1			٠,					NO N	110 1	
	MESSENGE	NO.	CARD	DEPTH (m)	ı	,C	5	٠/٠٠	SIGM	F = A	ANO	FIC VOLUA DAMALY—X10	; 0	△ 0 N. M. 10 <sup>3</sup>	VEL	LOCITY	02 m		O4-P g = 61/I	TOTAL-		2-N - o1/I	NO3-N yg - ai/l	SIO4→S yg • at/	pH
	HR 1/10	-			-				-				-		+			-+			-			-	-
				2222	1				25.0		0.0	31633		200	1.5	222		1			1	)		l	1
	0.44		STO	0000		82 82	363 363		258 258		UU	21522	01	000		232									
	060	J	OBS STD	0010		17	363		260		00	19945	0.	021		216									
			085	0010		17	363		260		00	1,,,,,		221		216									
			STD	0020		96	363		260		00	19503	0.	040		212									
	006	5	OBS	0020		96	363		260							212									
			STD	0030		63	363		261		00	18738	0	060		204									
			OBS	0030		63	363		261							204									
			STD	0050	17	66	363		264	0	00	16540	0	095		179									
			OBS	0050		66	363		264							179									
			STD	0075		49	36:		264		00	16230	0	136		178									
			OBS	0075		49		340	264		00	15725		17/		178									
			STO	0100 0100		24	363		265 265		00	15735	0	176		175									
			085			'24 '12	36:	340	265		٥٥	15579		215		176									
			STD	0125 0125		12		335 335	265		00	10075	, 0	21)		176									
			STD	0150		75	36:		266		00	14816		253		169									
			OBS	0150		75		335	266		•		, ,			169									
			STD	0200		23	36		26		00	13844	0	325		161									
			085	0200		23		330	267						15	161									
			STO	0250	15	65	36	28	268	33	00	13083	0	392	15	151									
			STO	0300	15	01	36	18	268		00	12612	0	456		138									
			OBS	0300		01		175	268							138									
			STD	0400		156	358		269		00	12315	0	581		103									
			OBS	0400		156		840	269		0.0	10046				103									
			STD	0500		75	356		271		00	10349	, 0	694		056 056									
			OBS	0500		.75 976		660	271		00	08789		790		999									
			5 T D OB S	0600 0600		976	354	42 415	273		50	0010	. 0	, , 0		1999									
			STD	0700		166	35		279		0.0	06855	. 0	868		934									
			OBS	0700		66		240	275			- 000		_ 00		934									
			OBS	0710		761		240	275							934									
			OBS	0733		760		240	275							938									
			SID	0800		97	350		276		0.0	05726	0	931		882									
			OBS	0800		97		080	276							1882									
			STD	0900		18	350		27		00	04824	• 0	984		+867									
			OBS	0900		18		075	27			0450				+867									
			STD	1000		91 91	350	08 075	27		UC	04586	9 1	031		4B73 4B73									
			OBS STD	1000 1100		+91 +65	35		27		00	04393	3 1	076		4879									
			OBS	1100		465		070	27		•	J-J).	, 1	2,0		4879									
			STD	1200		447	35		27		00	0448	3 1	120	-	4887									
			OBS	1200		447		040	27				٠			4887									
			STD	1300		438	35		27		00	04466	5 1	165		4900									
			OBS	1300		438		040	27							4900									
			STO	1400		414	35		27	82	0.0	04284	4 1	208		4907									
							2.5	035	27	9.7					17	4907									
			OBS	1400		414	30	0 0 0	211	02															
			085 STD 085	1400 1500 1500	04	414 401 401		98P		79P	00	0460	7 1	253	14	4918									

SHIP	LATITE	JOE	LON	MOCTA TOUR	MAR	SOEN	STA	TION T	IAA E	YEAR	CRUIT	ORIGINA	TOR'S	-	DEPTH TO	DEPTH OF	08	SER	AVE VATIONS	WEA	CODE			NOD	10 H
	-	1, 10		17.10	10*	).		DAY			NO	i. N	UMBE		MOTTOM	S'MPL"	S DIR	н	GT PER SE	C00	TYPE AN	1		NUN	8 E R
0υ	3510	) N	04	800 W	113		12			1968	E 2				1737	14	22	4	2	X 2	0 6			00	0.2
						COLOR	-	+	SPEED	BARO		AIR TEM	WET	VIS.	NO.	SPE	CIAL								
						CODE	+	-	FORC	£ [111.03	$\rightarrow$	BULB	9UL8		OBS. DEPTHS										
		Τ.				DT	SU	23	529	15	2	195	165	-	36			Ļ			-	1	_		
MESSEN	GI CAST	CAF	RD P€	DEPTH (m)	1	℃	5	٠	SEG	M.A.=T	SPECI	FIC VOLUM	AE C	Z A D		DCITY	02 ml/l	1	PO 4-P	101At-		NO3-	N S10. /1 49 *		рΗ
HR 1/	10				+				-				+	x 103	-			+		-		24 . 0.	+		_
		5	TD	0000	1	971	36	33	25	87	00.	21384	. 0	000	15	229		1			1		1		
06	50	08		0000		971		331	25							229									
		0B:	TD S	0010 0010		971 971	36 36	34 336	25 25		00	21384	. 0	021	157										
		S.	T D	0020	1	971	36	34	25	87	00	21421	. 0	043	15	232									
00	06	OB:	S TD	0020 0030		971 971	36 36	336 33	25 25		00	21516		064		232 234									
		08:		0030		971		328	25		00	21510	, ,	7004		234									
			T D	0050		965	36		25		00	21439	9 0	107		236									
		0B:	5 To	0050 0075		965 961	36	328 37	25 25		00	21155	5 0	160		236 239									
		083	S	0075	1	961	36	366	25	92		_			15	239									
		0B:	TD S	0100 0100		777 7 <b>7</b> 7	36 36	39 388	26 26		00	16622	. c	208	15 15	191 191									
		S	T D	0125	1	743	36	39	26	49	00	15912	? 0	248	15	185									
		OB:	S TD	0125 0150		743 709	36 36	388 35	26	49 54	00	15514		288		185 179									
		08		0150		709		346	26		00		•	200		179									
			TD	0200		647	36		26		00	14949	9 (	364		167									
		0B:	a TD	0200 0250		647 589	36	252 17	26 26	69	00	14410	) (	437		167 157									
		08		0250		589		170		69						157									
		0B:	TD S	0300 0300		527 527	36 36	02 016	26 26	71 71	00	14328	3 (	509		144 144									
			TD	0400	1	397	35	79	26	82	00	13510	) (	648	15	116									
		OB:	S ID	0400 0500		397 232	35 35	791 40		82 01	00	11903		775		116 075									
		0B:		0500		232		596	27		00	1190	, (	,,,,		075									
			TD	0600		019	35	_		22	00	09966	5 (	885		014									
		0B:	5 7 D	0600 0700		019 777	35	356 14	27 27	22 44	00	07780	) (	973		014 937									
		08:	S	0700	0	777	35	137	27	44					14	937									
		5 OB :	T D	0800 0800		709 709	35	19 185		57 57	00	06563	) ]	045		928 928									
		_	TD	0900		630	35			65	00	05830	) ]	107		913									
		08		0900		630		148	27							913									
		0B:		0 <b>925</b> 0 <b>97</b> 0		592 587		126 146	27 27							902 908									
		08:	S	0980	0	589	35	147	27	70					14	910									
		QB :	S TD	09 <b>9</b> 0 10 <b>0</b> 0		594 590	35 35	155		70 72	٥٥	05275	. ,	163	_	914 914									
		08		1000		<b>59</b> 0		165		72	00	0521.	, ,	103		914									
		OB:		1025		606		194		72						925									
		0B:		1050 1055		605 592		188 175		72 72						929 924									
		08	S	1080	0	559	35	136	27	73					14	914									
		5 08	T D	1100 1100		559 559	35 35	14 136		73 73	00	05182	2 1	1215		918 918									
		OB:		1114		542		126		75						913									
		OB:		1131		537	35	106	27							914									
		0B:	5 TO	1175 1200		517 519	35 35	089 09		75 74	00	05092	2 1	1266		913 918									
		OB:	S	1200	0	519	35	089	27	74		•			14	918									
		0B:		1218 1263		512 502		086 056		75 74						918 921									
			TD.	1300		487		06		76	00	05015	5 :	1317	14	921									
		OB.	S	1300		487		055	27	76	0.0	0470	,			921									
		- 5 - 08	ŢD	1400 1400		429		000		78 78	00	04739	,	1366		913 913									

IO. CODE	LATITU	DE LO	NGITUDE E SO	MARSDEN SOUARE	STATION THE	YEAR		STATION NUMBER	DEPTH TO BOTTOM	MAX, DEPTH OF S'MPL'S		WAVE ERVATIONS	WEA- THER CODE	CLOUD CODES		STA	DC TION M BER
078 OU	3504	N 04			12 01 1		E20 00	3	1829	14		4 3	X 2	0 6	1	00	003
, ,				WAT		IND BAR	O- AIP TE	MP. °C	NO.	SPEC	IAI	, ,- ,	,				
				COLOR	TRANS. OIR.	SPEED MET	ER DRY	WET COD	DEPTHS	OBSERV	A TIONS						
				DT	SD 23	516 14	9 172	155 7	32								
MESSENGR	CASI	CARD					SPECIFIC VOLU	ME E A D	501	ONL		PO4-P T	014L-P	NO2=N	NO3-N 5	SI 04-SI	_
TIME HR 1/10	NO.	TYPE	OEPTH (m)	T °C	s ·4.	SIG M A - T	ANOMALY-11	DYN. A x 103	VELC	CITY	O 2 ml/l		μg - α1/1	μg - o1/l		ug - a1.11	p)
-	1				1												
,		SID	0000	1947	3637	2596	002050	4 0000									
120	0	OBS	0000	1947 1947	36370 3637	2596 2596	002054	1 0021	152 152								
		STD 085	0010	1947	36370	2596	002054	1 11021	152								
		STO	0020	1947	3637	2596	002057	7 0041									
00€	6	085	0020	1947	36370	2596			152								
		STD	0030	1947	3637	2596 2596	002061	4 0062									
		08 S S T D	0030 0050	1947 1947	36370 3637	2596 2596	002068	6 0103	152 152								
		OBS	0050	1947	36370	2596	***************************************	0 0.02	152								
		STD	0075	1833	3640	2628	001776	3 0151	152	203							
		085	0075	1833	36402	2628			152								
		OBS STD	0085 0100	1803 1778	36429 3643	2638 2644	001633	4 0194	151								
		085	0100	1778	36431	2644	001033	4 0174	151								
		STD	0125	1746	3643	2652	001567	7 0234									
		085	0125	1746	36430	2652			151								
		STD OBS	0150 0150	1710 1710	3640 36400	2658 2658	001514	6 0272	2 151 151								
		SID	0200	1653	3625	2660	001509	9 0348									
		085	0200	1653	36250	2660			151								
		OBS	0240	1563	36151	2673			151								
		STD 085	0250 0250	1550 1550	3615 36150	2676 2676	001369	9 0420									
		OBS	0290	1526	36145	2681			151 151								
		STD	0300	1520	3613	2681	001338	5 0488									
		085	0300	1520	36125	2681			151								
		STD 085	0400 0400	1360 1360	3583 35830	2693 2693	001246	9 0617									
		STD	0500	1176	3556	2709	001109	7 0735	151 150								
		085	0500	1176	35560	2709			150								
		STD	0600	1023	3539	2723	000982	5 0839									
		085 STD	0600 0700	1023 0790	35385 3520	2723 2746	000755	5 0926		016							
		085	0700	0790	35195	2746	000755	5 0926	149								
		085	0712	0786	35220	2749			149								
		SID	0800	0716	3521	2758	000652	1 0997									
		OBS	0800	0716	35205	2758	000583	. 1056		931							
		SID	0 <b>9</b> 00	0620 0620	3513 35128	2765 2765	000583	4 1058		909 909							
		085	0915	0606	35105	2765				905							
		085	0923	0595	35080	2764			149	902							
		OBS	0950	0548	35039	2767				887							
		STD OBS	1000 1000	0530 0530	3504 35039	2769 2769	000537	0 1114		888 888							
		OBS	1045	0531	35080	2772				897							
		OBS	1095	0530	35049	2770			149	904							
		STD	1100	0508	3505	2773	000511	8 116		896							
		OBS	1100	0508	35049	2773	000505	7 1717		896							
		STD	1200 1200	0471 0471	3501 35005	2773 2773	000505	7 1218		897 897							
		STD	1300	0458	3498	2773	000518	7 1269		908							
		085	1300	0458	34978	2773			149	908							
		STD	1400	0435	3498	2775	000496	5 1320									
		OBS	1400	0435	34980	2775			149	915							

					_				,	_																7
TET IO.	SHIP COOE	LATITU	OE 1/10	LONGITUDE	DAUFT	MARSOEN SOUARE	STATION T		YEAR	c	RUISE NO.	51	TOR'S ATION UMBER		1 1	770	MAX. DEPTH OF S'MPL'S			VE TIONS PER SEA	WEA THER COOL	CODE	5		NODC STATION NUMBER	N I
318078	ou	3458	-	04754 W	1	113 47	12 01	180		В	E 20 0	04			44	+	15	35		2	х6	0 6			0004	4
						COLOR	-	SPEI	ED ME	RO- TER	DRY BULB	Т	WET BULB	COD	DE DE	10. 85. PTHS	SPEC VABREC									
						DT	SO 35	51	-	76	161	$\rightarrow$	156	-+-	3											
	MESSENGR TIME HR 1/10	CAST NO.	CARE		(m)	1 7	5 %.	51-	GMA-T	s	PECIFIC VO	DEU A	a,E O	E A D YN. A x 103	у.	VELOC		03 ml/		0.4=P   = 61/I	TOTA L=P µg - 01/1		NO3-N	51 O a	Si ph	4
	1,12,17,10						1	$\dagger$		$\top$			$\top$		1		$\neg$		$^{\dagger}$							*******
	180	)	S T 08 S			1944 1944																				
	• • • • • • • • • • • • • • • • • • • •		ST			1944																				
			OBS			1944																				
	006		ST OBS			1924 1924																				
			51			1839																				
			OBS			1839																				
			ST OBS			1779 17 <b>7</b> 9																				
			ST			1724																				
			OBS			1724																				
			5 T 0 B S			1690 1690																				
			ST			1649																				
			OBS			1649																				
			ST OBS			1639 1639																				
			ST			1545																				
			OBS			1545																				
			0BS			1543 1537																				
			OBS			1537																				
			ST			1426																				
			0BS S1	-		1426 1259																				
			08\$	-		1259																				
			ST			1023																				
			OB S S T			1023 0840																				
			085			0840																				
			OBS			0749																				
			0B S S T			0 <b>73</b> 3 0689																				
			OBS			0689																				
			OBS			0694																				
			OBS OBS			0719 0716																				
			51			0649																				
			OBS			0649																				
			ST			0622																				
			OBS ST			0622 05 <b>7</b> 2																				
			0B S	100	0	0572																				
			ST			0500																				
			OBS ST			0500 0458																				
			OBS	120	0	0458																				
			ST			0432																				
			OBS ST			0432 0412																				
			OBS			0412																				
			ST	0 150		0399																				
			0B S	150	0	0399																				

PEFERENCE CTRY ID.	SHIP	LATITU	IDE	LONGI	TUDE S		ARSOEN DU ARE	STATION TO	ME	YEAR	CRUISE		IATOR'S		DEPTH	DEPT OF	H OR	WAVE SERVATIONS		COOES			NOOC	N I
DDE NO.	CODE	•	1/10		17.10	S 10		MO OAY H			NO.	<u> </u>	NUMBER	$\dashv$	BOTTOM	2,Wbr	'S DIR.	HGT PER SI	CODE	TYPE A M	1	$\rightarrow$	NUMBE	R
318078	00	3502	N	0480	)3 W	111	3 58 WA		000	1968			5 MP. ℃		3338 NO.	15	_	4 2	X 2	0 6	1		000	5
							COLOR	TRANS. DIR.	SPEED	71.21	ER	ORY BULB	WET	CODI	0.00	SP OBSER	EGIAL VATIONS							
							DT	$\vdash$	503	21		67	134	7	41									
	MESSEN GE TIME	CAST	CAR		DEPTH (m)		1 %	s ·/	SIGN	MA-T		c voru	ME S	∆ D rN. M c 103	SOL		02 ml/l	PO4-P	TOTAL-P		NO3-N	\$104-	Sı	
	HR 1/10	NO.	TYP	'E		4-					ANOA	ALT-E	107	C 10 <sup>3</sup>	, AETC	CITY		yg - a1/1	μg - α1/l	μg - σt/1	μg - at/1	yg - 0	1/1 P	
	1		ST	го	0000		1949				ľ				1			ŀ						
	000	)	OBS	5	0000		1949																	
			ST OBS		0010		1949 1949																	
			5 T		0020		1949																	
	006	5	085	5	0020		1949																	
			ST		0030		1949																	
			OB S		0030		1949 1949																	
			OBS		0050		1949																	
			08.5		0060		1949																	
			OBS ST		0065 0075		1949 1947																	
			OBS		0075		1947																	
			085	5	0080		1909																	
			08 S		0085		1849 1806																	
			085		0100		1806																	
			08.5		0105		1799																	
			ST		0125		1754																	
			OBS ST		0125 0150		1754 1723																	
			08.5		0150		1723																	
			ST		0200		160B																	
			0BS ST		0200 0250		1608 1585																	
			08.5		0250		1585																	
			şT		0300		1518																	
			OBS ST		0300		1518																	
			085		0400		1420 1420																	
			ST	0	0500		1234																	
			OBS		0500		1234																	
			ST OBS		0600		1045 1045																	
			085		063B		0969																	
			OBS		0644		0922																	
			OBS ST		0659 0700		0889 0844																	
			085		0700		0844																	
			OBS		0715		0816																	
			085		0740		0779																	
			08 S		0760 0795		0 <b>764</b> 0 <b>801</b>																	
			ST		0080		0779																	
			OBS		0800		0779																	
			ST OBS		0900 0900		0672 0672																	
			085		0960		0642																	
			08.5		0980		0630																	
			ST OBS		1000		0626 0 <b>62</b> 6																	
			085		1045		0594																	
			085	5	1080		0598																	
			ST		1100		0602																	
			08 S		1100 1130		0602 0599																	
			ST		1200		0475																	
			OBS	,	1200		0475																	
			ST		1300		0437																	
			OBS ST		1300 1400		0437 0431																	
			OBS		1400		0431																	
			OBS		1460		0431																	

	SHIP	LATITU	DE	LONGITUDE	MARSDEN SQUARE	STATIC (G	N TIMI		YEAR	CRUISE	DRIGINA	TOR'S		DEPTH	DEPTH DE	085	WAVE ERVATIONS	₩ EA-	CLOUD		:	NODC TAT DE
NO. C	DDE	•	1/10	· '1/10 D	10" 1"	MO DA		/10		NO.	N	UMBE		BOTTOM	S'MPL'S	Dis	HGT PER SE		TTPE AM	7-	*4	U N/ 9 E
8078	00	3456	N	04758 W		12 0			968	E20			!	4938	15	33	1 2	×1	0 6			000
					COLOR		WIN		BARC	· -	AIR TEN	WET	VIS.	ND. 085.	SPEC	TAL						
					CODE	(6)		OR ORCE	(mbs	_	ULB	8018	_	OBS. DEPTHS								
		,			DT	SD	14 5	13	247	1	56	122		32		1						1
	ESSENGR TIME 0	CAST	CARD		1 %	5 .	4.	SIGM	A T		VOLUA	A E	E A D	. VELO	COL TIDE	02 ml	PO4=P 22 = 01/3	101AL=9	ND2-N	ND3-N	5: 04-5: #g = 01:	p.
H	R 1/10				+	+	-+		-			+	x 10 <sup>3</sup>				-			74.0		+
			STI	0000	1962	362	7	258	5	002	1602		000	152	226							
	060		085	0000	1962	362	70	258						152								
			ST1	0010	1962 1962	362°		258 258		002	1638	0	022	152								
			STI		1962	362		258		002	1674		043	157								
	006		OBS	0020	1962	362		258						152								
			ST		1962	362		258		002	1711	. 0	065	157								
			08 S	0030	1962 1946	362°		258 258						152 152								
			STI		1871	3630		261		001	9336		106	15								
			08.5	0050	1871	3629	99	261						15								
			STI		1781	3638		263		001	6681	0	151	15								
			085 STI	0075 0 0100	1781 1747	3638 3643		263 265		001	5622	, ,	191	15	183							
			OBS	0100	1747	364		265			,022			15								
			085	0120	1728	364		265				_		15								
			5T1		1724 1701	3640 3640		265 266			5210 4946		230 268	15								
			085	0150	1701	3639		266		001	4740	, (	200	15								
			ST	0200	1631	3629		266		001	4321	. 0	341		163							
			OBS	0200	1631	3628		266						15								
			ST(	0250 0250	1546 1546	361°		267 267		001	3474	0	410	15	144							
			OBS	0260	1536	361		268							142							
			ST	0300	1525	361	5	268	2	001	3311		477	15	145							
			085	0300	1525	3619		268						15								
			0BS STI	0350	1431 1331	3596 3578		268 269		001	2254		605	15	121 094							
			085	0400	1331	357		269							94							
			ST		1136	3554		271		001	0509	0	719	15								
			085	0500	1136	3550		271		000				150								
			STO	0600 0600	0936 0936	3528 352		273 273		000	9107		817		983 983							
			ST		0746	351		275		000	7050	6	898		926							
			085	0700	0746	351		275							926							
			OBS OBS	0750 0765	06 <b>89</b> 0 <b>66</b> 7	3513 3514		275 2 <b>7</b> 6							911 905							
			085	0780	0653	351		276							902							
			085	0790	0697	352		276							922							
			STI		0690	352		276		000	5884	0	962	149								
			OBS OBS	0800 0810	0690 0679	3521 3521		276 276							921 919							
			STI	_	0646	352		277		000	5437	, 1	019	14								
			OBS	0900	0646																	
			STI		0605	352		277		000	5026	1	071		921							
			08 S	1000 1100	0605 0538	3527 3516		277 277	-	000	4721	. 1	120		921 910							
			085	1100	0538	351		277							910							
			ST	1200	0486	350	9	277		000	4642	! 1	167		904							
			OBS	1200	0486	3501		277 277		000	/. E E -		212		904							
			ST1 0BS	1300 1300	0439 0439	350: 350:		277		000	4553	, 1	213		901 901							
			ST	1400	0415	350	)	277	9	000	4579	1	258	14	907							
			OBS	1400	0415	349		277							907							
			STI	1500	0410	3491	3	277	Я	000	4709	. 1	305	14	922							

TRY ID.	SHIP	LATITE	IDE	LONG	SITUDE	NC TR	50	RSDEN UARE	STA	TION T	I AA E	YEAR	CRUIS	ORIGIN	ATOR'S		DEPTH TO	DEPT	H o	WAVE	ONS	WEA-	CLOUD			NODE
DE NO.	CODE		1/10		1/1	o ON	10*				4R,1/10		NO		NOTATION		BOTTON	OF S'MPI	L	HGT PE		0000	TYPE A M		j	NUMBER
318078	00	3452	N	047	53 W	1	11:			02	120	1968	E 2				4663	15	35	3 4		x 1	0 6			0007
								WA			WIND	BAR		AIR TE	_	VIS.	NO. 085.	SP	ECIAL							
								COLOR	TRAN (m)	S DIR.	SPEEL OR FORC	E (mb		DRY BULB	BULB	CODI	OBS. DEPTHS	OBSER	VATION!	5						
								DT	SD	04	505		0	162	123	7	29			1						
	MESSEN	GR CAST	CAI	20	DEPTH	(m)	1	т 'с		5 -4.	1 510	MA-I	SPECII	IC VOLU	ME S	AN. M	so	UND	0	, PO.	_Р	TOTAL-P	NO2-N	NO3-N	5104-5	,
	HR 1/1	or NO.	TYI	PE	Otrin	(in)					310	mA-1	AND	MALY-I	0, 0	x 10 <sup>3</sup>	. VEL	OCITY	O <sub>2</sub> ml.	/1 µg -	61/1	µg - a1/1	μg - α1/t	yg - at/l	μg - 01/	
	12	0	5 08:	T D	000			1944 1944		31 314		93 93	00	2083	5 01	000		221 221								
	12	. •		TD.	001			1944		31		93	00:	2087	2 01	021		223								
			OB:		001	0		1944		314		93			_			223								
				D	002			1944		31		93	00:	2090	B 01	042		225								
	0.0	16	08		002			1944		314		93	00.	3004				225								
			08	T ()	003			1944 1944		31 314		93 93	00,	2094	5 01	063		226 226								
				TO	005			1943		31		93	00	2099	3 0	105		229								
			0B		005			1943		314		93						229								
				r D	007			1799		35		32	00	1734	5 0	153		193								
			083	TD.	007			1799 1754		348 41		32 49	00.	1589	ر د	194		193 185								
			08		010			1754		414		49	00.	100	• 0	1 7 4		185								
				T D	012	5	:	1714		37		55	00	1535	7 0	233		177								
			08		012			1714		372		55						177								
			083	10	015			1684 1684		34 336		59 59	00	1501	4 0	271		171 171								
				T D	020			1629		25		66	00	1453	8 o	345		162								
			OB:		020			1629		253		66						162								
				TD	025			1539		12		77	00	1365	5 04	415		141								
			OB:	TD.	025			1539 1484		123 03		77 82	00	1327		483		141 131								
			OB:		030			1484		034		82	00.	1321	• 0.	403		131								
			5		040			1329		78		96	00	1217	8 0	610		094								
			OB:		040			1329		784		96						094								
			S :		050			1169 1169		61 612		14 14	00	1058	6 0	724		054								
			S		060			1109		23		32	000	882	3 0	B21		054 968								
			OB:		060			899		234		32		-002				968								
			0B		062			866		219		36						959								
			0B:		068			0784 0806		181		46 47						937								
				T D	070			800		232 23		48	000	742	5 0	902		947 947								
			OB:		070			800		234		48			-			947								
			085		072			784		272		53						945								
			08		073			774		272		55	00/			970		944								
			OB:	T D	080			705		24 235		62 62	001	0613	5 0	970		927 927								
			5		090			645		22		69	000	9552	5 1	028		920								
			OB:		090			645		219		69					14	920								
			5		100			588		20		74	000	501	2 1	081		914								
			0B3	T D	100			)588 )528		197 15	27	74 78	000	3464	9 1	129		914 905								
			085		110			528		150		78				,		905								
				D	120			0460		04		77	000	464	7 1	176		893								
			083	5 T D	120			0460		041 99		77 70	004	14.62	0 3	222		893								
			OB:		130			)422 )422		99 989		78 78	000	0463	· 1.	222		893 893								
				TD	140			409		98		78	000	0462	8 1	268		904								
			OB:		140			409	34	979	27	78					14	904								
				10	150			397		96		78	000	0467	1 1:	315		916								
			083		150	·U	(	397	34	964	27	78					144	916								

REFERENCE	,										T-						MAX.				-		_				
CTRY ID.	SHIP	LATITU		LONGITUDE	DRIFT	MARSDEN		ION T		YEAR	CRUISE		STATION			TO TO	DEPTH	1	SERVA.	TIONS	THER CODE	CODES			NO STAT	DC HON .	
	-	2151	1/10				MO				NO.	-	NUMBE	R	+		S'MPL"S			ER SEA	×1	0 6	1			08	
318078	00	3456	NI	04802 W		113 48 WA		2   I	VIND	1968	,		MP. *C		-	663 NO.	15	04	2  2	.	1 71	1 0 16	1	,	00	UB	
						COLOR	_	+	SPEED OR FORC	METI	R	ORY BULS	WET	COL	5.   DE D	NO. OBS. EPTHS	OBSERV	ATIONS									
						DT	-	06	505			17	172	-	-	31	_		1								
	AFESSEN GR	CAST	CAR	D DEPTH	(-)	7 %	Τ,	٠	1	MA-T	SPECIFI	c vor	UMI	<b>∑</b> ∆ 3	D		JND	O 2 m1/	/1 10	4-P	101AL-P	NO2-N	NO3-N	\$104	- 5.	рН	T
	TIME HR 1/10	NO.	TYF	E	(111)		,	•••	310		ANDA	A LY - I	(10)	¥ ∆ € DYN. 7 x 10 <sup>3</sup>	3	VELC	OCITY	0,1111	. P8	- 01/1	yg • a1/1	ид ~ ot. l	yg = al/i	µg - 1	01 1	···	4
			5	000	0	1945											1										
	180	)	OBS			1945																					
			S			1945																					
			0B:			1945 1945																					
	006	,	OB:	5 002	0	1945																					
			S			1946 1946																					
			0B3			1945																					
			OB:	5 005		1945																					
			0B3			1942 1799																					
			OB:	5 007	5	1799																					
			S.			1748																					
			OB:			1748 1715																					
			083	5 012	5	1715																					
			OBS			1704 1676																					
			OB:	015	0	1676																					
			5			1621																					
			OB:			1621 1554																					
			OB:			1554																					
			S OB :			1488 1488																					
			5	TD 040	0	1361																					
			0B:			1361 1331																					
			08:			1274																					
			5			1137																					
			08: 5:			1137 0885																					
			OB:			0885																					
			OB:			0819 0826																					
			0B:			0816																					
			5	TD 070	0	0823																					
			0B:			0823 0703																					
			0B:	5 080	0	0703																					
				TD 090		0643																					
			OB:	5 090 TD 100		0643 0601																					
			0B	S 100	0	0601																					
			OB:	TD 110 S 110		0553 0553																					
				TD 120		0462																					
			OB.	5 120	0	0462																					
			5 0B	TD 130 S 130		0429 0429																					
				TD 140		0411																					
			ов.			0411																					
			0B	TD 150 S 150		0399 0399																					

																					_							
CODE NO.	SHIP	LATITU		LONGITUDE	DRIFT	SAM UO2	ARE		TATION TI		YEAR		RUISE	S	ATOR'S		1	TO TO	MAX. DEPTH OF	1		ATIONS	WEA- THER COOE	CLOUG			NODC STATION NUMBER	1
318078	-	3502	1/10 N	04802 V		113	58		0AY H		1968	-	NO.	009	UMBER		-	749	5'MPL'S			PER SEA	X1	0 6	<u></u>	-+-	0009	1
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	,,,,	,			[	WA		W	SPEE	- 184	RO-		IR TEA	AP. °C WET	VIS	T	NO.	SPEC	CIAL		<b>L</b>	1 71	1 0 10	1		0003	
							CODE	(AT	,, 014.	FORC	E (m	bs)	BU	)LB	9018	000	0	EPTHS	OBSERV	ATIONS								
	MESSENGR		CAR			$\Box$	DT	51		503	27	_	15		122		ь,	sou			Τ.				F.,,	T	T	7,
	THE C	NO.	TYPE	OEPTH	(m)		ζ.		s ·/	210	MA-T		ANOMA	VOLU.	;; o	Δ D γ N. M γ 10 <sup>3</sup>	۸.	AFFO	CITY	02 ml/l			101AL-P - 01/1	NO2-N	NO3-N Pg - at/1	\$1 O4-5	рН	ć
	ļ		ST	000 G	0	19	942	-				Ì			1													
	000		08S	000		19	942																					
			OBS	001	0	19	42																					
	006		ST OBS	002	0	19	943																					
			S T 0B S				944																					
			ST OBS				944																					
			ST	D 00.	15	19	936																					
			085	008	15	15	808																					
			ST OBS	010	0	18	928 928																					
			OBS ST				781 778																					
			0B\$	012			778 758																					
			0B S	019	0	17	758																					
			5 T 0 B S	020	0	16	571 571																					
			5 T 0B <b>S</b>				64																					
			085 S <b>T</b>				33																					
			OBS OBS	030	0	15	33 96																					
			5 <b>T</b>	D 040	0	13	69																					
			OBS ST	D 050	0	1	969 196																					
			08 S S T				96 000																					
			0BS				000 311																					
			OBS ST	068	15	0.8	306 788																					
			085	070	0	0.	788																					
			08S	079	0		781 712																					
			S T 08 S				716 716																					
			ORS	088	0	06	342																					
			OBS	090	0	06	38																					
			ST OBS	100	0	0.6	518 518																					
			08.5 08.5		_	_	511 508																					
			ST OBS				584 584																					
			0BS	114	0	0 9	18																					
			085	118	10	0	509																					
			ST OBS	120	0	0	04 504																					
			085 085		0		93																					
			ST OBS	D 130	0	04	29																					
			ST	D 140	0	0.4	18																					
			0BS	D 150	0	0.4	18																					
			OBS	150	0	04	12																					

FERENCE Y ID.	SHIP	LATITU	DE LO	NGITUDE NGITUDE	MARSDEN : SQUARE	STATION	TIME	YE	AR	CRUISE	5	TATION		OEPTH TO	DEPTH OF	085	WAVE ERVATIONS	0000			5	NODC
Y ID. IE NO.	CODE	•	1/10	* 1/10 ° E	10" 1"	MO DAY	HR,1/10	_		NO.		UMBER		BOTTOM	S'MPL'S	DIA	HGT PER S	CODE	TIPE AMI			UMBER
18078	ou	3502	N 04	804 W		12 03		19	68	E20 (			. 1	2377	15	28	1 2	×1	0 6			010
					COLOR	TER TRANS. DI	WIND SPEE OR FORCE	0	BARO METER	OR'	7	WET	VIS.	NO. OBS. DEPTHS		CIAL ATIONS						
					DT	SD 18			261		-	128	+	31								
	MESSENGR	CAST	CARD		T	1	-17			SPECIFIC V	-			-	UND		PO <sub>4</sub> -P	TOTAL-P	NO2-N	NO:-N	SIO4-SI	T
	TIME HR 1/10	NO.	TYPE	OEPTH (m)	7 %	5 %.	210	GMA.	-1	ANOMAL	Y-X1	07 D	Δ 0 YN. M x 10 <sup>3</sup>	VEL	OCITY	O 2 ml/l	µg + α1/I	νg + σ1/I	μg = 61/1	et/I - وبر	99 - 01/l	р∺
	0.0		STD	0000	1940																	
	060	1	OBS STD	0000	1940 1941																	
			OBS	0010	1941																	
			STD	0020	1941																	
	906	•	085 STD	0020	1941 1941																	
			085	0030	1941																	
			STD	0050	1941																	
			085	0050	1941																	
			STD 085	0075 0075	1796 1796																	
			STD	0100	1762																	
			085	0100	1762																	
			STD	0125	1738																	
			085 STD	0125 0150	1738 1672																	
			085	0150	1672																	
			STO	0200	1582																	
			085	0200	1582																	
			STD OBS	0250 0250	1539 1539																	
			085	0280	1543																	
			STD	0300	1518																	
			085 5 T D	0300 0400	1518 1327																	
			085	0400	1327																	
			STD	0500	1159																	
			OBS	0500	1159																	
			5TD 085	0600 0600	0992 0992																	
			085	0670	0884																	
			085	0690	0808																	
			STD	0700	0788																	
			085 085	0700 0 <b>73</b> 0	0788 0766																	
			085	0750	0776																	
			STD	0800	0729																	
			085	0800	0729																	
			STD OBS	0900 0900	0626 0626																	
			085	0953	0557																	
			STD	1000	0580																	
			085	1000 1040	0580 0587																	
			08S STD	1100	0514																	
			085	1100	0514																	
			STD	1200	0476																	
			OBS	1200	0476																	
			STD OBS	1300 1300	0453 0453																	
			STD	1400	0422																	
			085	1400	0422																	
			STD	1500	0408																	

REFERENCE					[_ <u>.</u> [	MARS SOU	DEN	\$1	ATION (G M	TIME			1	01	RIGINA	A TOR'S			DEPTH	MAX	t.		WAVE	_	WEA-	CLOUD	T		NOOC	7
TRY ID.	CODE	LATITU	DE 1/10	LONGITUDE	DRIFT	200			IGM			YEAR	ci	NO.		TATION		7	10 0110M	OF S'MPL			RVATION		THER	TYPL AM			STATION	R
318078	OU	3500		04800 W		113	58	12		12	0	1968	3 E					4	435	15	_		2 2		Х2	0 6			0011	ı
							WA	_		WIN	02.50		RO- TER	A I		AP. °C WET		IS.	NO. 085.	SP	ECIAL									
							COLOR	+	-+-	_	0# 0#0	{m	bsl	19	LB	BULE	4		OBS. DEPTHS	0031.11										
ſ		1					DT	5	D  1	9   5	15	2:	55	1	_	161			501		T	_1.	T	Τ.					-	_
	MESSENGR TIME HR 1/10	LCAST NO.	TYPE	DEPTH	(m)	1	°C		5 %	.	ŞIĢ	MA-I	1,	PECIFIC ANOMA	VOLU:	07	≨ ∆ DYN. x 10	M.		CITY	02	ml/!	PO4-P	1	0TALP -g = 01/1	NO2-N ug - 01/1	NO3-N ug - at/	S104	ρF	н
					_																									
	120		511 085	000			951 951																							
			5T) 08S	001			947																							
			51	002	0	1	947																							
	006	•	0BS ST	002			947 946																							
			085 ST	003			946 944																							
			085	005	0	1	944																							
			ST 085	007			936 936																							
			\$T 085	010 010			943 943																							
			51	012	15	1	769																							
			085 085	012 014			769 758																							
			ST 085		0	1	754 754																							
			085	016	5	1	724																							
			5T 08S	D 020			676 576																							
			51		0	1	609 609																							
			085 51	030	0 (	1	459																							
			085 ST	030 040			459 384																							
			085	040	0	1	384																							
			51 085	D 050 050			251 251																							
			5 T 08 S	060 060			044 044																							
			OB S	067	70	0	874																							
			S T 08 S				839 839																							
			ST 085	0 080 080			713 713																							
			sT	D 090	0	0	636																							
			085 085	090 091			636 588																							
			51				593 593																							
			085 085	101	11	Ο	587																							
			085 085	102 103			603 589																							
			085	105	50	0	600																							
			ST OBS	110	0.0	0	580 580																							
			ST 0BS	D 120	0.0		519 519																							
			085	124	40	0	506																							
			085 5 <b>1</b>				438 438																							
			085	130	0.0	0	438 458																							
			08.5 S.T	D 140	0.0	0	452																							
			085 085		00 70		452 441																							

IO.	SHIP	LATITU	DE 1/10	LOF	NGITUDE	DBUT	MAR! SOU	SDEN ARE	STAT	ION T		YEAR			OTAT TAT	101	OEP TO BOTT	OE	) F	085	WAVE SERVATIONS [HGT[FEF] SE	11	EA+ FER DDE	CLOUD COOES			NOOC STATION NUMBER
078	011	3511			800 N	-	113	1				1968	-	01			320				2 2	x	1	0 6		-	0012
, 0 , 0		J J I I	11	0-7	000 1	• 1	115		TER		VINO			AIR TE		*C VIS	NO	.	SPECIAL		E   E	, ,,	• 1	0 .0			0012
								COLO	TRANS	OIR	SPEE	D ME	TER	ORY BULS	81	ET COI	OEP!		ERVA TIO	2110							
								DT	SD	12	S20			00	1	72 7	32			$\dashv$							
[	MESSENGI	CAST	CA		_				1		١		SHOR	C VOIU	_	₹ △ (	5 1	SOUND	T		PO4-P	TOTAL		NO2-N	NO3-N	5104-	ε.
	MESSENGE TIME HR 1/10	NO.	TY		DEPTH	1 (m)	1	°C	5	٠/	\$11	SMA-T	ANOA	ALY-E	107	X 103	M. \	ELOCITY	02	m1/1	yg = 01/1	NB - 0		μg - a1/1	μg - a1/1		
					-																		$\exists$				
,				TD	000			961																			
	180	J	OB:	S TD	000			961 957																			
			OB:	S	00	10	1	957																			
				TD	00			956																			
	006	5	08	S TD	00:			956 956																			
			OB:		00			956																			
				TD	00			953																			
			0B:		00			953 894																			
			S	TD	00	75	1	814																			
			08		00			814																			
			08	TD S	010			756 756																			
			5	TO	01	25	1	719																			
			08		01			719 679																			
			OB:	TD S	01			679																			
			S	TD	020	0.0	1	601																			
			OB:	S TD	020			601 544																			
			OB.		02			544																			
				TO	030			459																			
			OB.	S TD	030			459 319																			
			OB.		04			319																			
				TO	050		_	144																			
			08	S To	050			144 969																			
			ОВ		06			969																			
				TO	07			829																			
			OB.	S TD	070			829 711																			
			08		08			711																			
				TD	09			638																			
			0B 0B		09			638 619																			
				TD	10			588																			
			08		10			588																			
			08	S Tp	10			596 512																			
			OB		11			512																			
			08		11			514																			
			OB S	S TD	11			542 500																			
			0В	S	12	00	0	500																			
			08		12			447																			
			S OB	TO S	13			466 466																			
			OB		13			466																			
			08	S	13	25		443																			
			S OB	TO	14			425 425																			
				S TD	15			415																			
			J	' '	10	00	0	412																			

REFERENCE	SHIP	LATITE	100	LDNGITUDE	Darkt NDCT#	SOUARE	STAT	TION T	IME	YEA	R	CRUISE	RIGINA	_		OEPTH TO	DEP	tH O	WA	VE TIONS	WEA	- CLOU		$\neg$	NDDC	٦
-+-			1/10	1/10	Z -1	0. 1.	мо	DAY	HR.1/10		_[	NO.	N 2	UMBER		80110 A	S'MP	,		PER SE	THER	TYPE AA			STATION NUMBER	4
31807	8  OU	3458	3 N	04803 W	111				000	196	8	E20				4755	1	5 21		2	X2	0 6			0013	-
						COLO	ATER TRANS	+	WIND	D 8	A RO-		IR TEN	P. °C	VIS.	ND. 085.	S	PECIAL								
						CDDE	(m)	J UIK.	FOAC	E fr	mbs)	BL	LB	BULB		DEPTHS	0825	RVATIONS								
			1 -			DT	SD	22	513	2	30	20	6	178	7	26										
	MESSENGI TIME HR 1/10		CARD	OEPTH (	lm t	ĭ °C	s	٠4.	SIG	I-AM		SPECIFIC ANOMA	VOLU N	,E	∆ D N. M 10 <sup>3</sup>		UNO	D <sub>2</sub> ml/		04-P - 01/I	TDTAL-P		NO3-N		рН	
									+		+		_	'	10-	+		-	-		µg • at/l	μg - q1/I	μg - σt/l	yg - o1/i		_
	000	1	ST:			1942	'		'		1			1		1		l		1			1		1	
	000	,	ST			1942 1942																				
			OBS			1942																				
	000	,	STI			1942																				
	006	•	OBS ST	0020 0030		1942																				
			085	0030		1942 1942																				
			ST			1941																				
			OBS	0050		1941																				
			STO			1877																				
			OB\$	0075 0100		1877 1782																				
			085	0100		1782																				
			STO		1	1745																				
			0B S	0125		1745																				
			STO	0150 0150		1692 1692																				
			STO			1624																				
			OBS	0200		1624																				
			STO			1564																				
			OBS STO	0250 0300		1564 1529																				
			nBS	0300		1529																				
			STD	0400		1342																				
			OBS	0400		1342																				
			STD OBS	0500 0500		1152 1152																				
			STD			1019																				
			085	0600		1019																				
			STD			792																				
			OBS	0700 0800		792 705																				
			OBS	0800		705																				
			STD	0900		635																				
			OBS	0900		635																				
			STD OBS	1000 1000		)599 )599																				
			STO			1534																				
			OB \$	1100		534																				
			STD	1200		460																				
			OBS	1200	0	460																				
						44.4																				
			085	1250	0	441																				
					0	441 441 423																				
			085 085 510 085	1250 1260 1300 1300	0 0 0	441 423 423																				
			085 085 570 085 570	1250 1260 1300 1300 1400	0 0 0 0	441 423 423 410																				
			085 085 510 085	1250 1260 1300 1300	0 0 0 0	441 423 423																				

REFERENCE														Sauce:					MAX.	_		-				
Ter   10.	SHIP	LATITU	101	LONGITUDE	DIBIT	SOL	SDEN JARE	5.7	ATION T	IME	YEA	A.R	CRUISE		STATION		DEP	0 1	DEPTH	08	SERVATIONS	WEA-	CLOUD			NODC
ODE NO.	ODE	•	1/10	1/10	0 <u>z</u>	10*	1.	MO	DAY	R,1/10			NO,		NUMBER		BOTT	MO	S'MPL'S	DIP	HGT PER SEA	CODE	TYPE AM	Y		NUMBER
318078	OU	3451	N	04808 W		113		12	-	060	196	68	E20	01		,	484	6	15	24	1 2	×1	0 6			0014
							COLOR	-		SPEE		BARO METEI		ORY	MP. °C	- VIS	NO OB	5.	SPEC ORSERVA	IAL						
							CODE	Lim	DIR.	POR	ĊE	(mbs1	6	ULB	BULB	-	DEPT	THS	ORZEKYA	TIONS						
_							DT	SI	23	\$20	) ;	220	1	94	172	7	29									
AA E	ESSENGR TIME 6	CAST	CAR		lm I	1	₹0		5 %.	Sto	GMA-	т	SPECIFIC	VOLL	ME S	Δ D	.	sout		O 2 m1/:		OTA L-P	NO2-N	NO3-N	SI O4=	
	R 1/10	NO.	TYPE			_		1		1		_	ANOM	W.L1		x 10 <sup>3</sup>	1	VELO	CITY		yg = 01/1	μg = αI/I	µg = al/l	yg - alvi	μ <b>g</b> - σ1.	pH
				0000	2	١,	947	1																		
	060		ST OBS	0000			947 947																			
			ST	0010	)	1	946																			
			OBS	0010			946																			
	006		51 085				945 945																			
			ST				944																			
			OBS	0030			944																			
			ST OBS	0050 0050			940 940																			
			OBS	0060			938																			
			ST				814																			
			OBS	0075			814																			
			ST OBS	0100 0100			744 744																			
			OBS	0110			730																			
			ST				726																			
			OBS	0125 0150			726 706																			
			08.5	0150			706																			
			ST				622																			
			OBS ST	0200 0250			622 542																			
			085	0250			542 542																			
			ST				511																			
			083	0300			511																			
			ST OBS	0400			334 334																			
			ST				129																			
			OBS	0500			129																			
			ST OBS	0600 0600			924 924																			
			51				724 716																			
			OBS	0700	)	0	716																			
			OBS	0750			651																			
			ST OBS	0 0 80 C			629 629																			
			OBS	0810	)		621																			
			OBS	0820		0	662																			
			ST OBS	0900			630 630																			
			51				602																			
			OBS	1000	)	0	602																			
			ST				538																			
			0B S S T	1100 0 1200			538 488																			
			OBS	1200			488																			
			ST			0	432																			
			0BS <b>5</b> T	1300 1400			432																			
			085	1400			410 410																			
			ST			0	416																			
			OBS	1500	)	0	416																			

ERENCE	SHIP	_		- :	MARSDEN	2	TATION	TIME	Ī		RIGINA			OEPTH	M.A.			A VE VATIONS	WEA-	Crono		N	000
ID.	CODE	LATITU	DE LO	NGITUOE 8	SQUARE	MC	(GMT		YEAR	CRUISE NO.	\$T- NI	ATION UMBER		10 10110	0.6	1 *		T PER SEA	CODE	TIPE AM	-	NU 317	MBER
18078	00	3455	N 04	803 W	113 4	12		120	1968		015		Τ-	4114 NO.	T		1	2	X1	0 6		0	015
					COL	OR TR	ANS OIR	SPEE	D ALET	ER C	YBC	WET	CODI	DEPTH	92 93280 2	ECIAL VATION	s						
					D	-	D 25	$\overline{}$			00	200	$\overline{}$	37			1					,	
	MESSENC NME HR 1/1	CAST NO.	CARD	DEPTH Lm1	r to		s ·4.	210	G 44 A - T	SPECIFIC	VOLUM	;t 8	ΣΥΝ. Μ χ 10 <sup>3</sup>	. VE	LOCITY	02 m		PO4-P µg - a1/1	101A L=P µg - 01/1		NO3-N yg - a1/l	\$1 O4-\$1.	рн
		i	STD	0000	194											İ							
	12	0	OBS	0000	194	ĺ																	
			STD OBS	0010	194 194	l																	
	00	6	STO OBS	00 <b>2</b> 0	194 1 <b>94</b>																		
			STD OBS	0030	194 194																		
			STD	0050	194	L																	
			OBS STD	0050 0075	194 194																		
			OBS STD	00 <b>75</b> 0100	194 188																		
			OBS	0100	188	5																	
			OBS STD	0115 0125	179 176																		
			OBS STD	0125 0150	176 172																		
			OBS	0150	172	5																	
			STD OBS	0200 0200	163 163	7																	
			STD OBS	0250 0250	157 157																		
			STD OBS	0300 0300	153 153																		
			STD	0400	136	1																	
			OBS STD	0400 0500	136 119																		
			OBS STD	0500 0600	119 100																		
			OBS	0600	100	9																	
			STD OBS	0700 0700	081 081																		
			OBS OBS	0715 0722	075 076																		
			STD	0800	0 <b>7</b> 0	7																	
			0BS 0BS	0800 0840	070																		
			OBS STD	08 <b>90</b> 0900	∩64 064																		
			OBS STD	0900 1000	064 060																		
			OBS	1000	060	8																	
			08 S 08 S	1050 1055	061 061																		
			STD OBS	1100 1100	059 059																		
			085	1128	054	1																	
			08.5 08.5	1152 1170	055 049	8																	
			STD OBS	1200 1200	046 046																		
			OBS	1210 1230	046	3																	
			OBS OBS	1250	045	0																	
			STD OBS	1300 1300	044 044																		
			STD	1400	041	7																	
			OBS	1400	041	7																	

REFERENCE	ЧНЕ	LATITU	DF	LONGITUDE	MAR SQL	SDEN	ST	ATION 1	TIME	YEAR			ATOR'S		DEPT	TH	MAX, DEPTH		W A V BSERVA		WEA- THER	C10110	-		NC TATION	
CODE NO.	CODE	LATITU	1/10	- 1, 10	10.	1.	MQ	DAY	!	ILAX	CRUISI NO.		STATION NUMBER		BOTT		S'MPL'S			ER SEA		1451 YES			UM-BER	-
318078	ou	3501	N	04802 W	113		12 TER		180	1968	-		6 MP. ℃		457	- 1	15	27	11	1	X1	0 6		(	0016	
						COLOR	TRAF	15. 010	SPEED	BAR MET	ER	ORY	WET	COD	NO OBT	5	SPEC OBSERV	JAL MOITA	5							
						DT	+	J 25	514	I (mp	-	94	172	7	34	-			-							
	MESSENGE TIME HR 1/10	CAST NO.	CARD	DEPTH (m	1	c	\	5 %.	+	MA-T	SPECIFI	C VOLU	ME S	A D		1013	ND CITY	O g ml			214 L=P	1-01-1- 12-21	NOgels NOgels	S104-S	ρН	T
	HR 1/10						+-		+-					x 10 <sup>1</sup>	+-				-				pg - sur	p3 - 40		_
	180		STI OBSS STI	0000 0010 00100 00200 00300 00500 00100 00100 00100 00150 00150 00150 00200 00200 00200 00400 00500		999999999997777666655553311900008487734491320399959444444444444555555555441188666996665552279991188811000993320399959115233388																				

ERENCE	SHIP	LATITU	DE	E LONGITUDE		SDEN	51	ATION	TIME	YEAR	CRUI	ORIGIN	ATOR'S		DEFTH	DEFI	H OBS	WAVE ERVATIONS	WEA- THER	CLOUD		5.1	DDC
ID.	CODE	•	1/10	1/10	¥ 10	1	MO	DAY		1	NO		NUMBER		BOTTO	V S.W br	'S DIR	HGT PER SEA	CODE	TYPE AMI		N	UM8ER
18078	ou	3500	N	04759 W	113		12		000	1968	3 E 2	0 01			4206	15	32	2 2	X 2	0 6	l	(	017
						COLOR	TER		WIND	D 1 44 C	RO-	ORY	WET	VIS.	NO. 085.	OBSER	ECIAL VATIONS						
						CODE	Im	,	FOR	CE (m	ba)	BULB	BULB	$\perp$	DEFIN.	0036	72110113						
	·	1	ı —			DT	SI	26	50	3 25		200	178		35	<u> </u>	ļ ——l	Ţ					
	MESSENGI TIMI HR 1/10		CAR		, 1	r τς		s ·4.	Si	GMA-1	SPEC	IFIC VOLU	ME 0	X 103	. AEI	OCITY	02 ml/l		10TAL-P 29 - 01/1	NO2-N ug + at/1	NO3-N 1/1a - gy	\$1 O4=\$1 1/1a - Qu	рН
		-									$\top$												
	. 000	,	ST OBS			950 950																	
	00.		51	D 0010	1	950																	
			OB S			950																	
	00	5	08.5			949																	
			51 085			949																	
			51			948																	
			OB S	0050		948																	
			51 085			893 893																	
			51	D 0100	1	746																	
			0B 5			746																	
			OBS	0125	1	720																	
			\$1 OBS			689 689																	
			51			616																	
			OB S			1616 1543																	
			S1 083			1543																	
			51			478																	
			0B 5			1478 1353																	
			OB S	0400	1	1353																	
			ST OBS			1206 1206																	
			08	0550	1	1108																	
			S OBS			968 968																	
			08:			861																	
			OB:			855																	
			OB :			)816 )799																	
			OB:			799																	
			OB:	fp 0800 5 0800		721																	
			ов:	5 0825	(	0698																	
			OB:	TD 0900 5 0900		0651 0651																	
			S	TD 1000	(	7598																	
			OB:			0598 0610																	
			OB:			0613																	
			OB.			0610																	
			OB S	5 1090 70 1100		0570 0574																	
			ОВ	S 1100		0574																	
			S OB	TD 1200 S 1200		0538 0538																	
			ОВ	S 1232	. (	0470																	
			OB			0486 0458																	
			0B	TD 1300 S 1300		0458 0458																	
				TD 1400	) (	0451																	
						A ·																	
			0B S	S 1400 TO 1500		0451 0415																	

CTRY ID.	SHIP	LATITU	DE		GITUDE 3	8	MARS SQU	DEN ARE	1	TATION IGM	TIM TI	E	YEAR		CRUISE		STATIC	_			0	MAX. DEPTH OF	c	BSER	AVE VATIONS	WEA	1 00	OUD			NODE	IN .
CODE NO.	CODE	·	1/10		1/10	3	10*	1"	_	DAY				4	NO.	-	NUMB	ER	- 6	BOT.	TOM	S'MPL'S			GT PER SEA	CODE	TYPE	A AP 1			4UW8	ER
31 8078	00	3502	N	047	755 W	1	13		12 TER	2 05	1 2		196	_	E20		B MP. %	- 1	4	38		15	03	3	2	X 2	0	6	ļ		001	8
							-	COLOR		ANS DI	Т	SPEEC	) ME			ORY	WE		V15 ODE	08	0. 85.	SPE	CIAL ATION	s								
							}		+-	D 15		FORC	-	( Ad	$\rightarrow$	94	19	$\rightarrow$	$\overline{}$					-								
					· ·	T		DT	+	50 [13	, IS	02		60 T	!		٠-		_	42				4								
	MESSENGE TIME HR 1/10	및 NO.	CARE		DEPTH (m)		T	€		s ·/.		S12	MA-T		ANOM	ALY-I	10,	DYN X	10 <sup>3</sup>		VELD		Daw	1/1	PO4-P µg = 01/i	10 TAL-P	ND:	g=N a1/1	NO3=N vp + ot/l	\$104-5 yg - at/		H C
	114 1710					_	_		$^{\dagger}$		7	-		†			_			†-											1	
		. ,	ST		0000			943			Ċ			•								•		,	,			,				
	120	)	OBS ST		0000			943																								
			085	,	0010		19	943																								
	006	,	ST 085		0020			943																								
			085	•	0025		19	943																								
			ST 08S		0030 0030			940																								
			ST	٥	0050		19	935																								
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